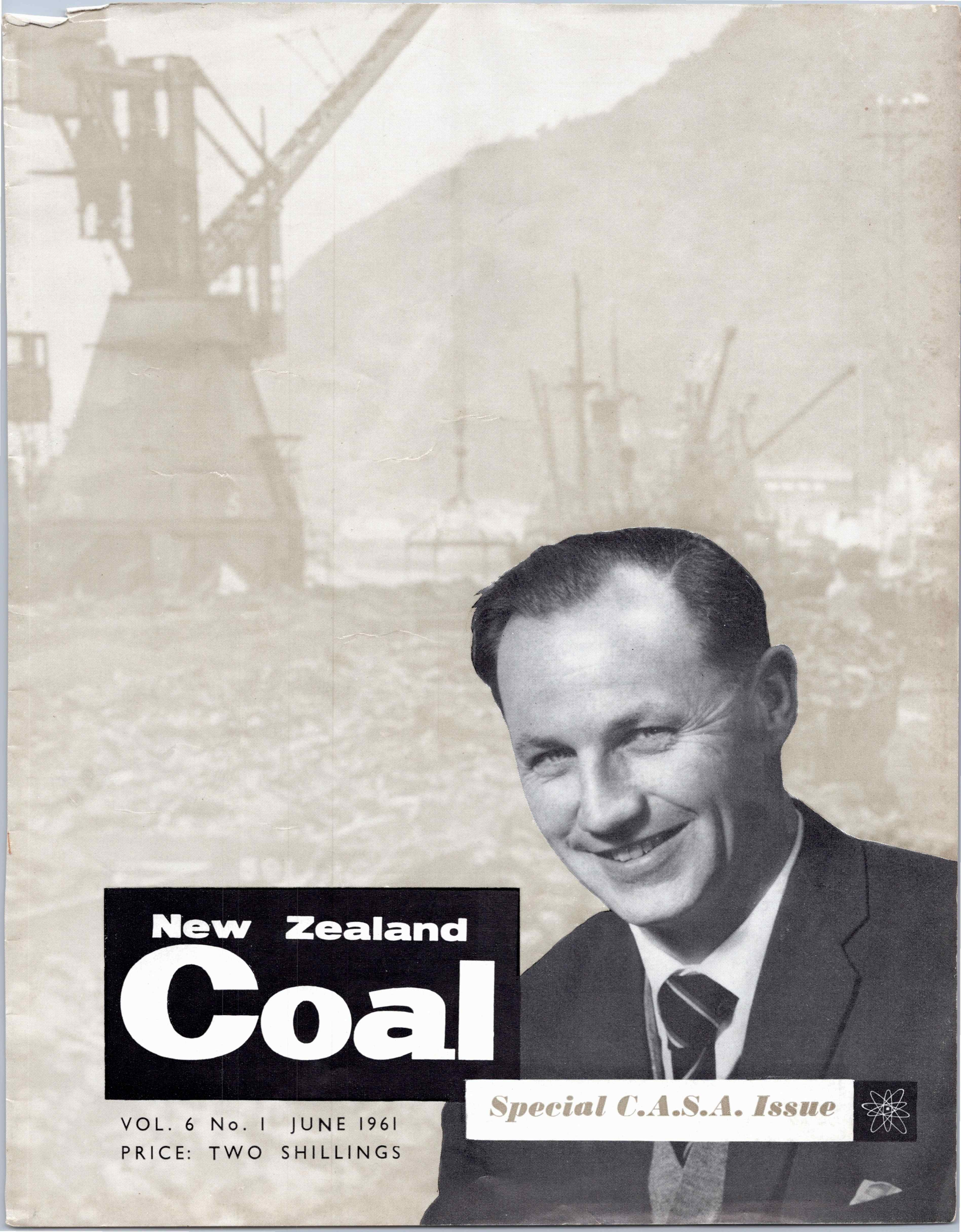

New Zealand
Coal

Special C.A.S.A. Issue

VOL. 6 No. 1 JUNE 1961
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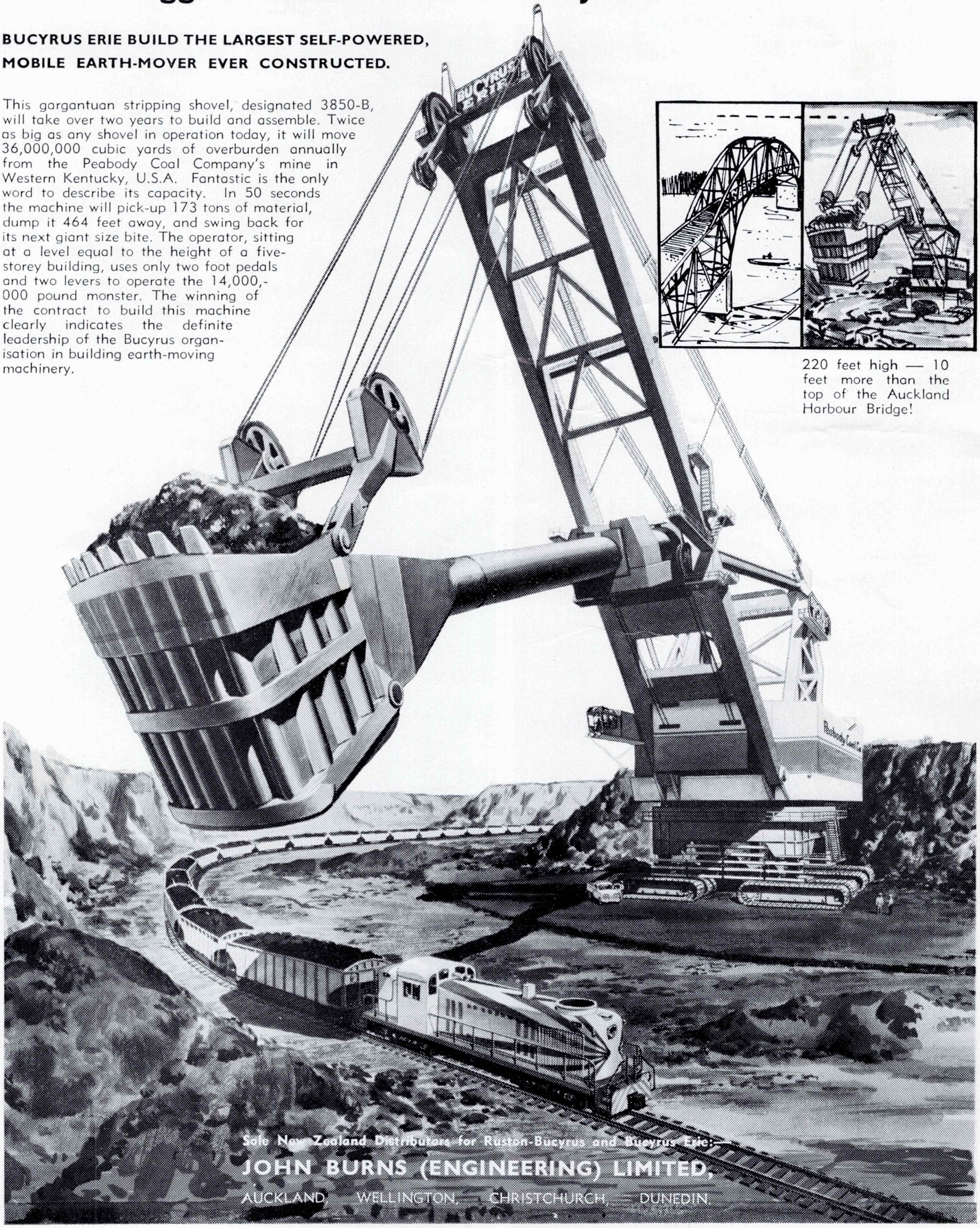

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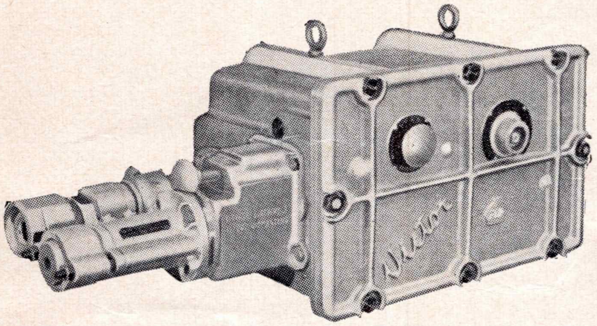

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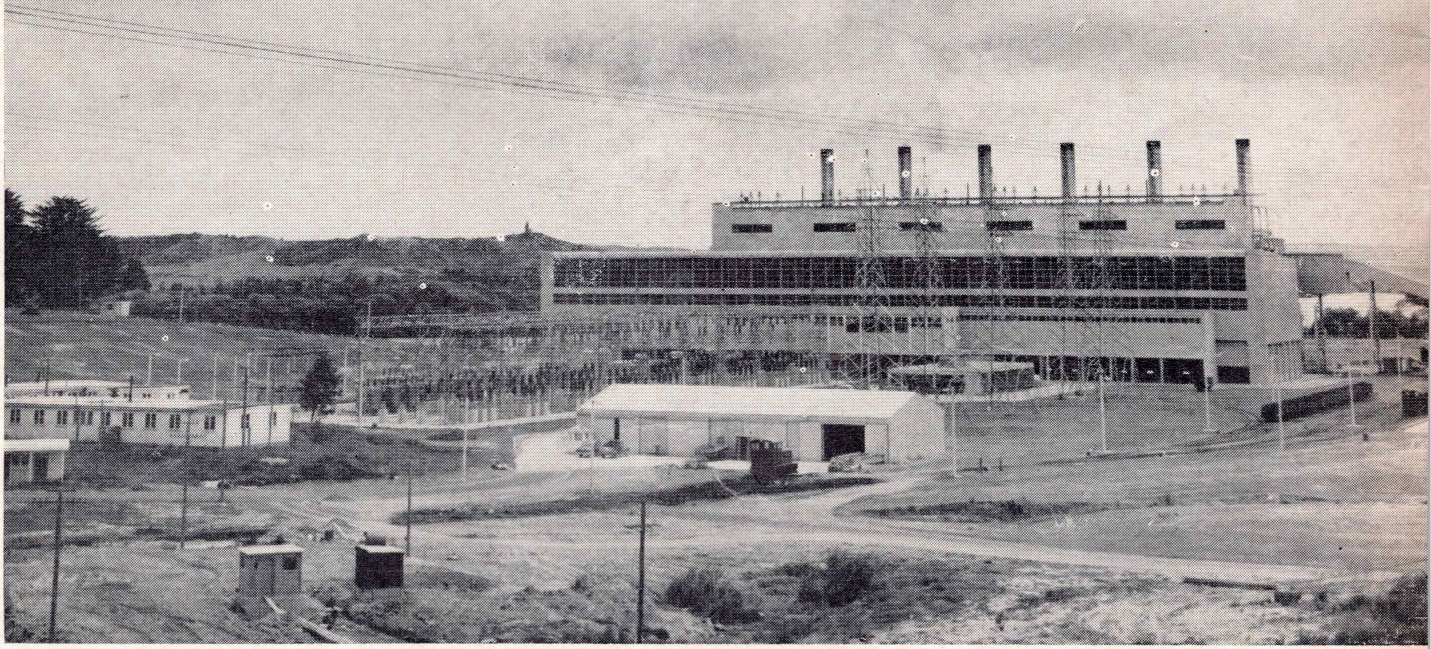
OUR COVER PICTURE

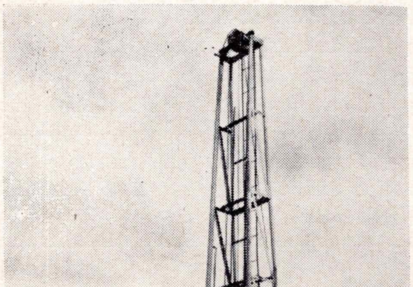
The new Coal Advisory Service Association promises big things for the future of the coal industry. Our cover picture shows the first director of CASA, Mr Berwyn Jones, taken against a background of coal that he will help to re-establish as a flourishing primary industry.

Printed by Cox & Dawes Ltd., 26 St. Paul Street, Auckland, C.1.

the "MEREMERE"



ON the banks of the picturesque Waikato, two miles south of Mercer, lies the little settlement of Meremere. It has an historic association with some battles of the Maori Wars in that area when British gunboats sailed up the river and bombarded the Kingite Maoris entrenched in that vicinity. The Maoris fought back with small arms and some old ships' guns for which the only ammunition available was scrap iron, long nails, scale-weights and similar ironware. After some general fighting they were driven out and Captain Cameron's troops occupied the area and built a redoubt on the highest point.



Drilling the coal for shooting.

Surrounding Meremere and Mercer are the rich farming areas for which the Waikato is famous, while other industries in the vicinity include sawmilling, flaxmilling, quarrying and shingle screening.

Meremere would probably have remained just a quiet little village without particular significance had it not been chosen as the site for one of the great fuel-driven generating plants of New Zealand.

In 1952 Messrs Preece, Cardew and Rider, consulting engineers, were commissioned by the Government to report on augmenting the existing sources of power in the North Island. Following their report it was decided in May, 1955, to build a 180,000-kilowatt station at Meremere. The consultants were engaged to design and supervise construction of the station and Sir Alexander Gibb and Partners were to be responsible to them for the civil engineering design work.

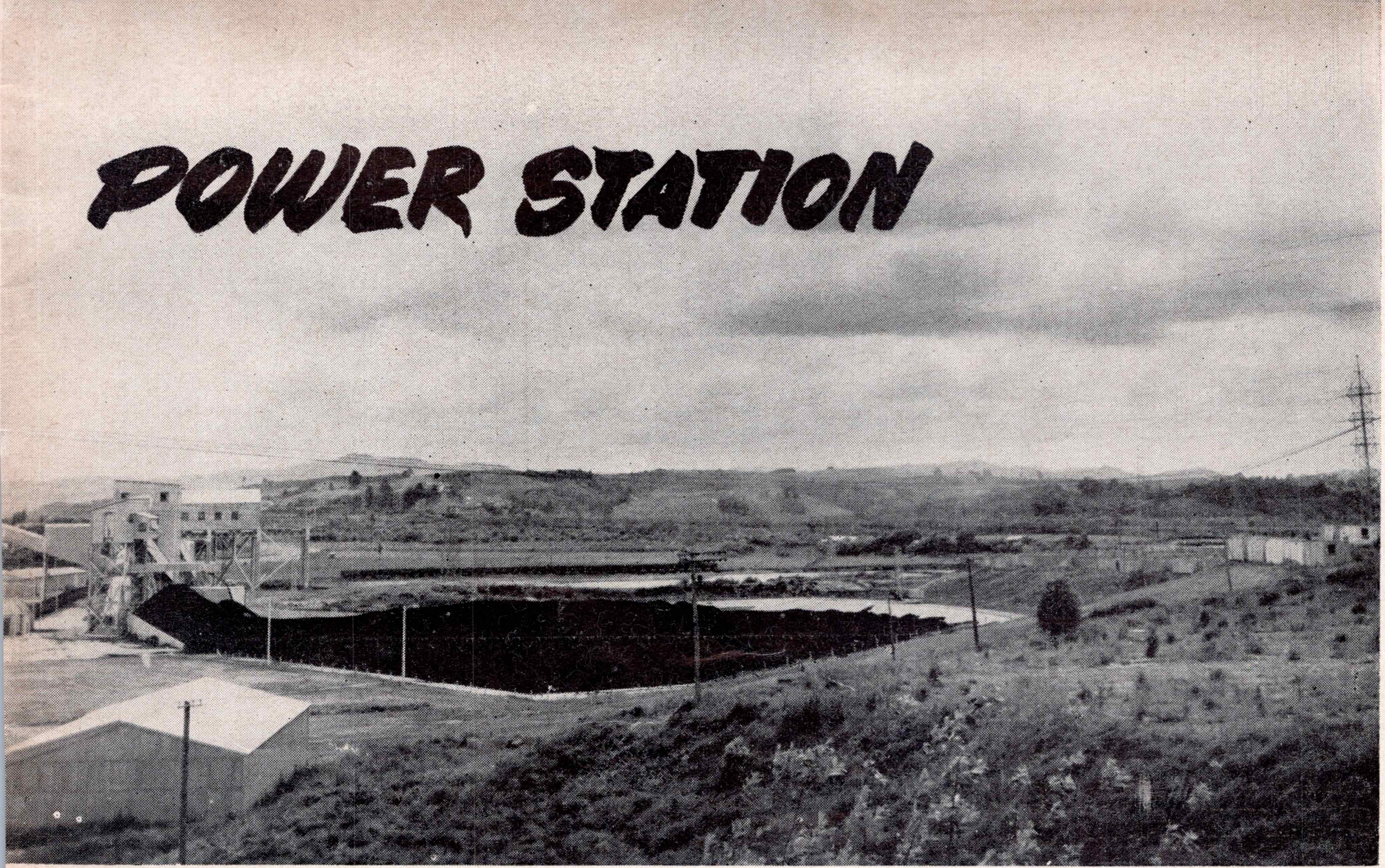
Construction began in 1956 with the Morrison Knudsen Co. Inc. of the United States and their New Zealand representatives of the same name, working in conjunction with H. K. Ferguson and Co. of the United States and Downer and Co. of New Zealand.

The Ministry of Works, on behalf of the N.Z. Government, let the site contract to these firms under the direct supervision of the consulting engineers. As the equipment became available for service, it was taken over by the N.Z. Electricity Department and put into operation.

Power from the first machine to be completed was fed into the North Island system in August, 1958.

From the outside the Meremere generating station is an imposing sight. Six great smokestacks rise 150 feet into the

POWER STATION



air and from each darkened top a wispy feather of smoke quickly dissipates and fades into the clear atmosphere.

Inside is even more imposing—and a little frightening. Six great turbo-alternators give the impression of unlimited unleashed power, while the continual thunderous hum of swiftly moving machinery heightens the impression.

Some of the statistics of this station are quite revealing. It is 460 feet in length, 270 feet in width, 111 feet in height, with the chimneys towering 150 feet above. To cool the plant requires 199 million gallons of water a day.

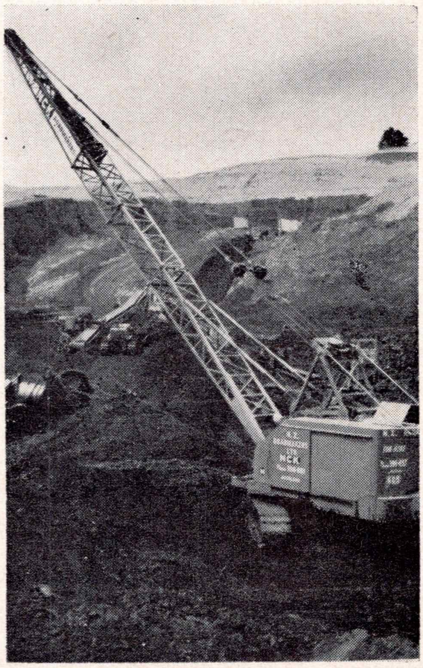
There are six boilers, each with a heating surface of 18,880 square feet created by approximately 15 miles of tubing. The tubes are cleaned by high pressure steam jets. Each complete boiler structure weighs 2640 tons, generates 300,000 lb. of superheated steam an hour and uses 425 tons of coal a day at full output. The temperature inside the furnaces can reach 2500° F. Ash falls into hoppers, where it is quenched by sprays. A grit extractor ensures that a minimum of ash reaches the outside air.

Six turbo-alternator sets each generate 30,000 kilowatts, giving the station a maximum capacity of 180,000 kilowatts. However, generally only four are in use while the others are being serviced.

To feed the voracious boilers requires 600,000 to 800,000 tons of coal annually, and this comes from two sources. One third is transported by road and rail from the Huntly coalfields 25 miles away, and the other two-thirds comes from Maramarua opencast.

A causeway has been built across the swamp between Maramarua and Meremere and above this two parallel monocable aerial ropeways carry the great buckets of coal 6¼ miles from the coal face to the power station. There are 421 buckets on each ropeway with a capacity of 45 cu. feet per bucket. These, travelling at 525 feet a minute, give a maximum capacity for the two ropeways of 300 tons an hour.

Maramarua was first exploited early in the century, but the workings were later closed down in favour of the Huntly fields until 1948 when Glen Afton Collieries commenced opencast mining there. When the Meremere coal-electric station was decided upon, a joint company of the Government and Glen Afton was set up to work the opencast.



Coal digging at Maramarua opencast.

Maramarua coalfield resources are about six square miles in area and it is estimated that 113 million tons of coal lie under the covering earth with the average depth of coal being 35 to 40 feet in the seam.

Winning the coal at the rate required for Meremere's consumption involves shifting 3,500,000 cu. yards of spoil annually from on top of the seam. This overburden is stripped by huge earthmoving machines into terraces until the coal is exposed. The large high-speed carryalls for this job have a capacity of 27 cu. yards.

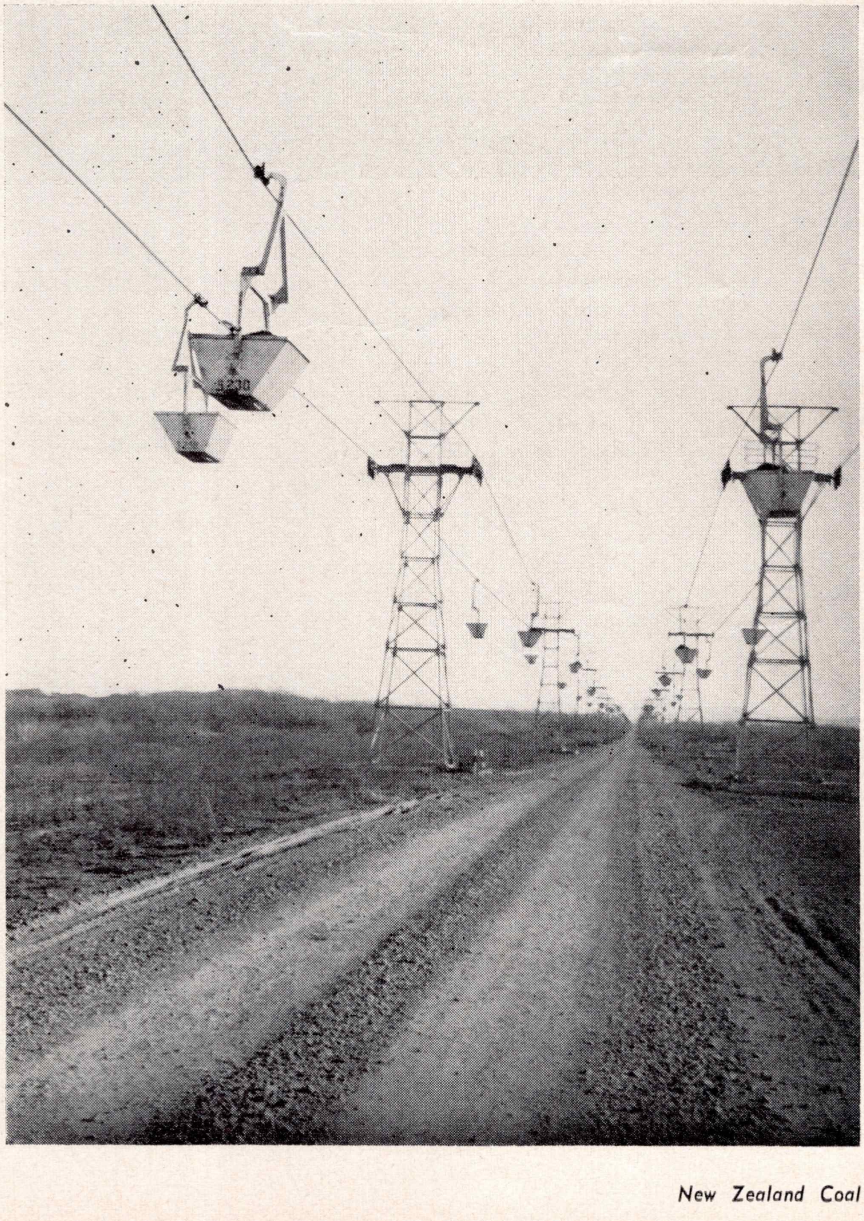
As the workings probe deeper into the rising land it is estimated that the pit will reach 390 feet in depth. Some of the spoil already removed was used in making part of the causeway across the swamp between Maramarua and Meremere, and the unfinished portion was completed from the Meremere end by the Ministry of Works.

Although statistics may be impressive, they still give no idea of the colossal amount of planning, coordination, engineering achievements and plain hard work that went into the construction of such an undertaking.

Next time you put your finger on a switch and light or heat responds to your touch, spare a thought for the army of trained men who made this possible for you and, most important for readers of Coal Magazine, remember that at least some of the power comes from Meremere, which operates on COAL-FIRED BOILERS.

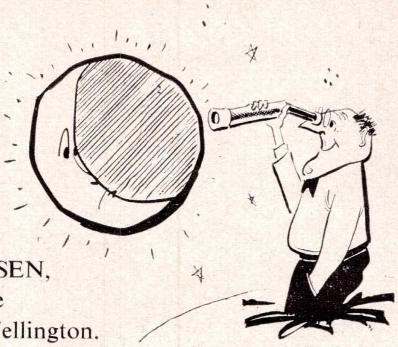
★ ★ ★

(Top, left to right) W. G. McGregor, manager, Maramarua opencast; T. Thomas, State Coal Depot, Auckland; Baldy Margan, N.Z. Roadmakers Ltd., contractors for digging coal; G. R. Murray, branch manager, State Coal Depot, Auckland.



(Bottom) The ropeway from Maramarua coalfield to the Meremere steam power station. Six and a quarter miles long, built across the swamp.

The Sky in June '61



by I. L. THOMSEN,
Director of the
Carter Observatory, Wellington.

The planets Jupiter and Saturn will be visible only well after midnight, and the planet Mars is now low in the western sky in the early evening.

If readers have been following Mars fairly regularly up to this time, they will have noticed that it is moving among the fixed stars, and is coming close to one of them. In case you have forgotten where Mars is located, you will find the Moon very close to it on June 18. Also nearby is the bright star Regulus.

Now if a close watch is kept from night to night, it will be found that Mars comes very close to Regulus on June 27. By watching the positions of the Moon and planets in relation to the background of apparently fixed stars, one soon develops the sense of movement of the bodies composing our solar system.

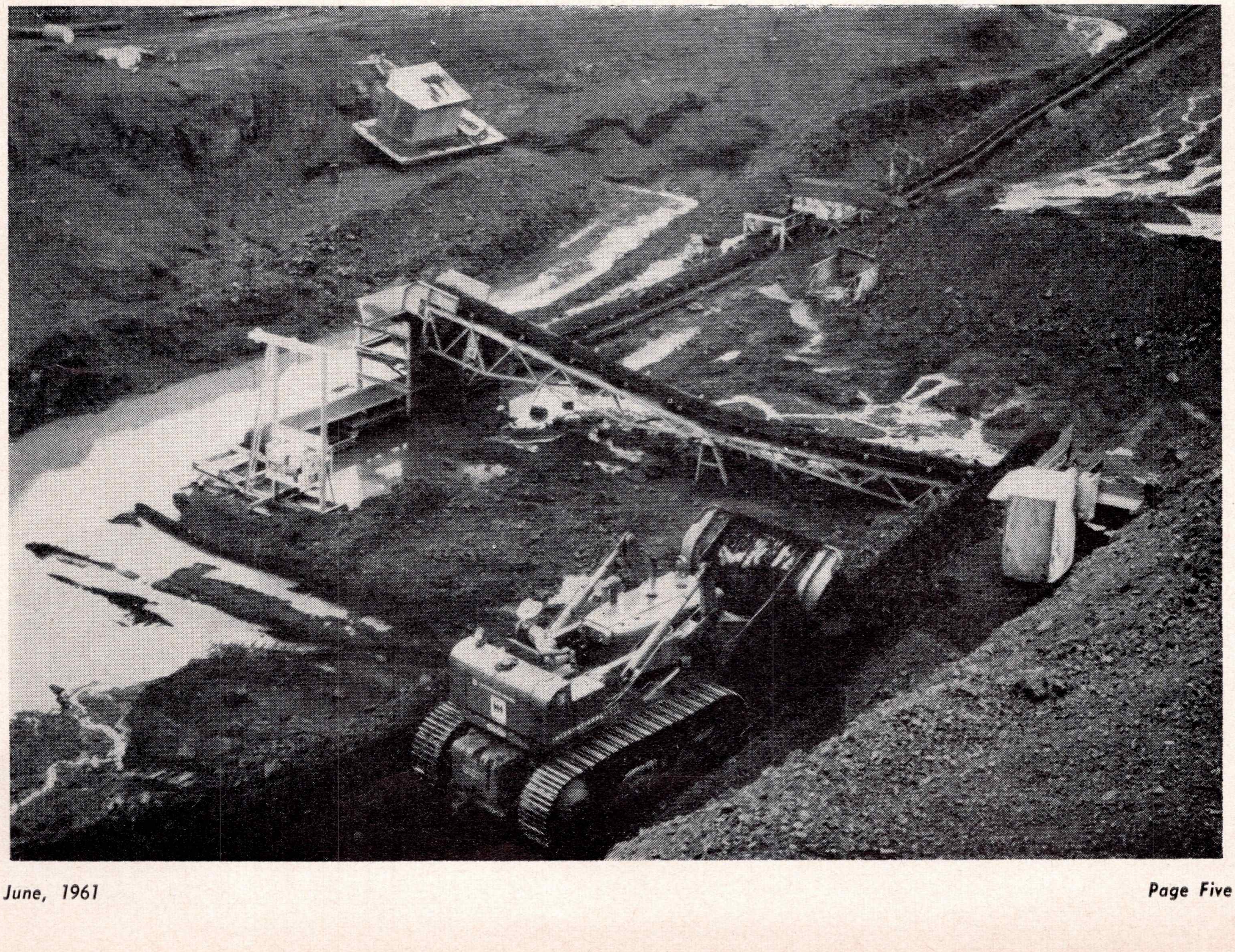
The Sun is overhead on the Tropic of Cancer at 4 a.m. on June 22, when the solstice is said to occur. This marks what we popularly refer to as the shortest day of the year, although the differences for several days before and after amount to only a few theoretical seconds. When June arrives we always look forward to this day, for we know that after it the daylight hours are going to increase and the long winter nights diminish.

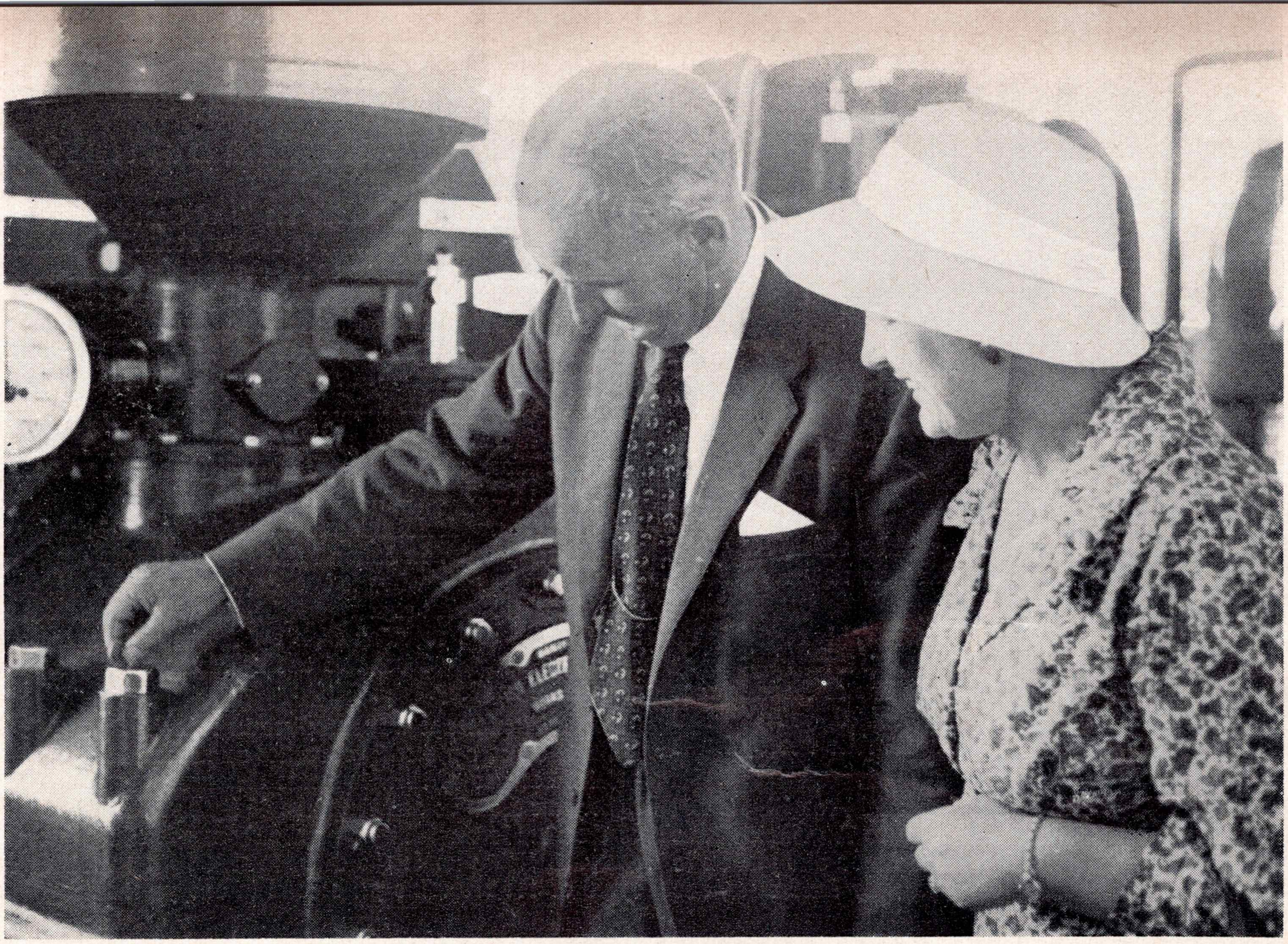
In the first half of the month, the bright star Arcturus is seen almost due north at 9 p.m. Higher up and more to the left (or west) is the star Spica.

The most wonderful thing to see at this time of the year is the Milky Way. In June of this year, a day in the first half of the month, when it is clear, with no moon, is the best. Then this great stream of light, starting from the eastern horizon and reaching high up through the Scorpion and the Southern Cross and ending in the south-west, is seen in all its glory.

With the telescope we soon discover that the Milky Way is made up of apparently countless numbers of faint stars —faint because of their immense distances. Regulus is 56 light-years from us and Arcturus 41 light-years; but many of the stars in the Milky Way are thousands of light-years away. A light-year is the distance that light travels at a speed of 186,000 miles per second in one year!

(Bottom) Maramarua coalfield. The bulldozer forces the coal on to the conveyor belt that feeds the ropeway to Meremere.





No vibration here! Mr Carter balances a coin on the machinery to prove his point.

NATIONAL M.P.s VISIT MEREMERE STATION AND MARAMARUA COALFIELD

Eight National members of Parliament and their wives made a tour of the Meremere coal-electric station and the Maramarua coalfield during the first week of March. They were accompanied by the chairman of directors of the coalfield, Mr A. Hayward, and his "right hand man", Mr P. Elliott, of the New Zealand Co-operative Dairy Company, Hamilton.

For the women in the party it was a day full of changes — changes in scenery, temperatures, heights and stiletto heels! These, at times, were changed for the flattest of "flatties," and hats and gloves had to go by the board, too.

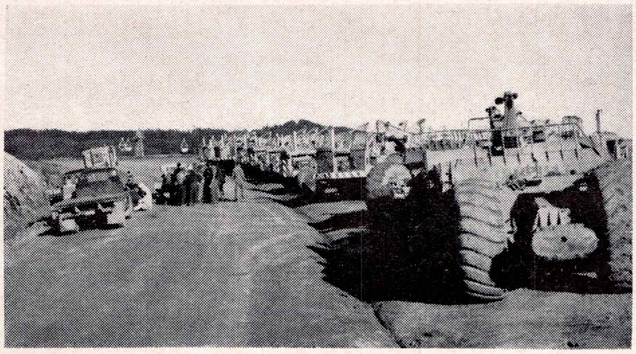
It meant early rising for most of the party—Mr. and Mrs. A. E. Allen (Franklin), Mr. and Mrs. L. Sloane (Hobson), Mr. and Mrs. H. R. Lapwood (Rotorua) and Mr. and Mrs. R. Muldoon (Tamaki). Mr. D. N. McKay (Marsden) became involved in other business in the morning but he and his wife caught up with the party later in the day.

Mr. and Mrs. L. R. Adams-Schneider came from Hamilton, with Mr. Halyburton Johnstone, member for Waipa. Mrs. D. J. Carter, wife of the member for Raglan, got up earliest of all—she provided scones for morning tea and then entertained the party to dinner at night at her home at Orini.

Mr. and Mrs. J. G. Reeves came a long way, too—from Waimai. Mr. Reeves is chairman of the Raglan electorate of the National Party and had to leave early to take a meeting on the way home.

By the end of the day's tour the group had seen the journey of coal from the Maramarua field across the the six and a half miles of ropeway to the generating station.

A visit was paid to the "bottom of the pit" at Maramarua, to the point



(Left) Carryalls lined up on the Maramarua coalfield.

(Right) A perfect end to the tour. Mrs D. J. Carter pours the tea. On Mrs Carter's right is Mr R. Muldoon, M.P. for Tamaki, and partially obscured is Mr A. Hayward, chairman of directors of Maramarua coalfield and chairman of the New Zealand Co-operative Dairy Company. On her left are Mr Carter and Mr Adams-Schneider.

where the coal is first put on the conveyor belt. Actually winning the coal is the firm of New Zealand Roadmakers, Ltd. The contract for stripping, amounting to three and a half million yards a year, is handled by Messrs W. A. Stevenson and Sons, Ltd.

The face being worked at the time was 70ft in depth and a conveyor belt an eighth of a mile long was taking the coal up to the screening plant. For part of its journey the conveyor belt goes underground. This is where the road passes overhead.

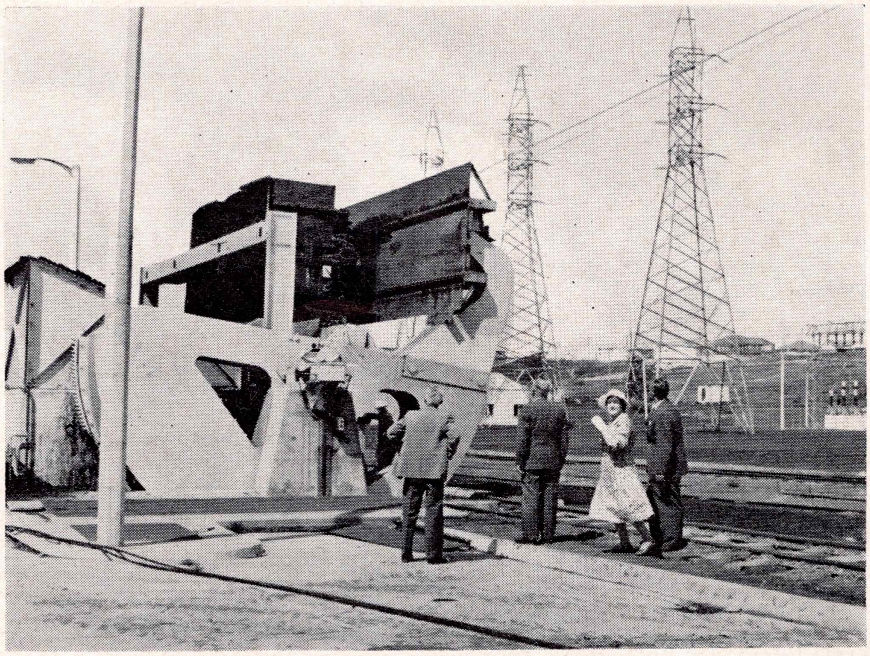
Some of the screened coal goes across to Meremere on the ropeway, and the rest is for commercial purposes, chiefly for dairy factories of the New Zealand Co-operative Dairy Company Ltd.

The party saw the first 25 acres to be grassed by the company, and, from another vantage point high above the swamp, saw drainage work being done.

At the immaculate generating station at least one member of the party confessed she did the tour with her hands in her pockets. There were so many inviting wheels, buttons, levers and switches that she took emergency precautions. Another confessed later that even turning on the tap over a handbasin gave her some qualms. "Could have blown the whole place up," she explained in trepidation.

Capable of generating 180,000 kilowatts the plant usually has four generators in operation while the other two are being serviced. Coal is used from the Huntly coalfields as well as from Maramarua. It comes by rail but in an emergency equipment is provided for road transport as well.

The Rotaside Tippler fascinated the party. It tips whole railway waggons of coal into the underground hoppers.



The Rotaside Tippler tips a whole railway wagon of coal at a time.

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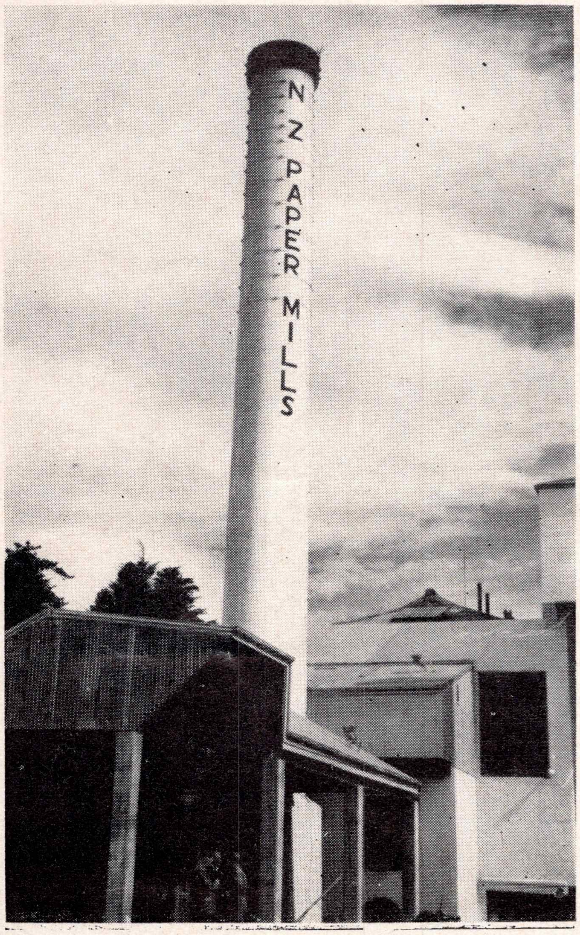
How they make paper in MATAURA ... using their own coal



One of the major industries of Mataura is the New Zealand Paper Mills. These mills have been in operation for over 80 years and produce a wide range of papers from fine tissues to heavy crafts, as well as paper felt, pressings and manillas for special trade requirements. They are powered by their own hydro-electric and steam-turbo generating plants and use coal from their own Paper Mills Mine only a few miles away by road. The annual production capacity is 8000 tons.

The mill superintendent is Mr R. J. Luck, who is always ready to welcome visitors to the mills, and the head engineer, Bill McLean, will show you round and explain the power units and distribution of power. Coal Magazine is also indebted to Mr J. D. Mcowan for this article about the mills in Mataura.

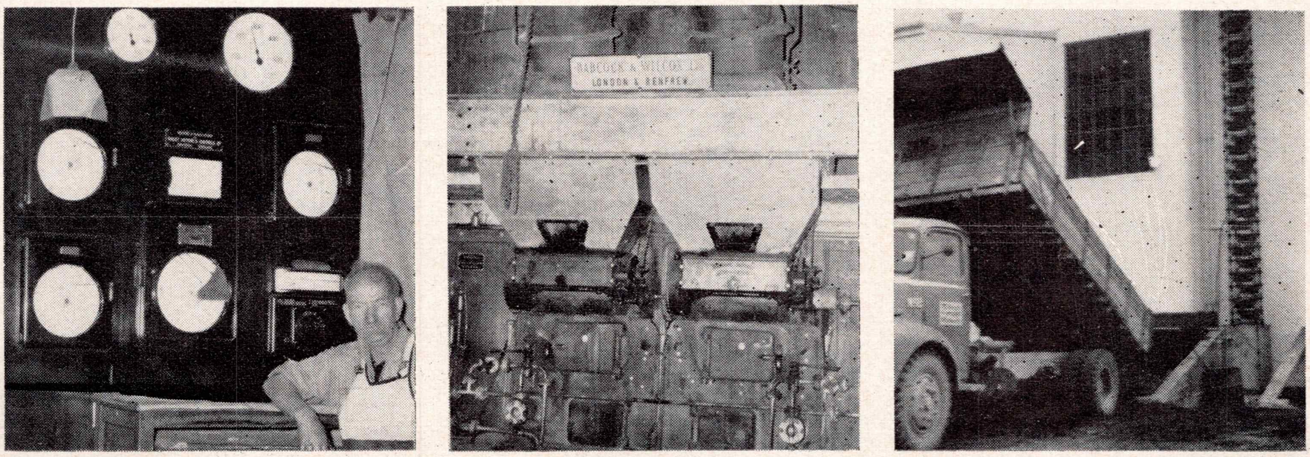
The power for the mills, as previously mentioned, is derived from two sources—hydro-electricity from an Escher Wyss turbine of 1000 kw. capacity, and a Parsons steam turbine of 1500 kw. capacity. The average daily use of coal for the Parsons unit is 70 tons. Two Babcock and Wilcox boilers produce the steam that is distributed to the three machines.

The pulp used to make wrapping papers is obtained from N.Z. Forest Products Ltd., Tokoroa, and pulp used to make special papers is imported from Sweden. The pulp is fed into a "Pulpmaster" unit which can handle two tons an hour. The material is then carried to the beaters, a very important part of the work, as here the fibres must be separated to the correct degree to ensure proper knitting when passing over the fine wire mesh at the paper machine. In the beaters the colouring

(continued on page 17)

They're doing a magnificent job in Mataura. With a population just under 2000, this town is surrounded by the rich farming areas of the Southland. Dairy factories, freezing works, sugar-of-milk and casein factories, flax milling, fertiliser works and coalmines all give a wide scope and variety to this southern area.

(Top) The New Zealand Paper Mills are powered by coal fired boilers. (Bottom left) Gordon Muir, shift fireman, at the control panel of the automatic boiler. (Centre) Coal is automatically flicked into these furnaces. It is estimated that 35 per cent is burnt while still in the air. (Right) Coal, transported from their own Paper Mills Mine, is tipped into the bins at the mills. Chain buckets carrying the coal up to the bins above may be seen on the right.



THAT PHOTO

"I have never known a picture in any publication that has caused so much interest as yours in the last "Coal" writes Danny Barnes of 5 Mill Road, Runanga. "It has been widely discussed and for weeks you could see groups studying the picture and naming people long forgotton. It was, in my opinion, the greatest working bee that ever took place on the Coast to make a safe place for hundreds who use this popular bathing place, but the sea washed it all away. I believe the local bodies, Grey Borough Council, Grey County Council and the Runanga Borough Council and private individuals along with the Surf Club, will this next twelve months, make improvements to what will be the most popular bathing place, both for the surf and lagoon, on the Coast."

Mr. J. Docherty also sent in a long list of names, and between these two stalwarts, we should have nearly all those in the photo.

We did rather stick out our neck in asking for all the names, but, like "Churchill's chicken," we have some neck, and now we can do no less than republish the photo with the names. And, thanks again John and Danny for sending in the names. We hope the august bodies you mentioned will take not and help improve the natural assets and advantages of the beach.

Here they are then, the workers at the Working Bee at Rapahoe Beach on March 12, 1928: Jim Smith (blacksmith), Charlie Griffiths, Leo O'Loughlin, Martha Kaye, Bob Airns, Georgie Long, Sid Judge, Liza Hambley, Mrs G. Miller and Celia, Harry Doriguzzi, Bob Smith and Mrs Smith, Hazel Smith, Thelma Smith, Sam Unwin, John Unwin, Arthur Kinsey, Mrs Kinsey, Grace Warburton, Bobby Richmond, Harry Pinn, Harry Southward, Mary Hall, George Miller (supervisor), Bob McTaggart (mayor), Steve Thomas, Albert Taylor, Bill Wainman, Jim Adamson, Bill Malpass, Archie Boddy, Tommie Halliday, Mrs Halliday, Arthur Warwick, Jim Isherwood, Jack McTaggart, Albert Currie, Danny Barnes, Chris Parsonage, Abb Pattison, Teddie Ward, Joe Dalziel, Bobbie Middleton, Frank Oakley, Billy Quinn, Clare Quinn, Eddie Flood, Mrs Smith (blacksmith's wife), Stewart Simmers, Mr O'Loughlin Snr., Mrs O'Loughlin Snr., Sid Armory, Mrs Joe Reynolds, Tiny Farquhar, Annie Southard, Jimmy Medlin, Harry Duggan, Mrs MacEwan, Stan Manderson, Nellie Symes, Alf Hill, Mrs Ogle, Bill Simpson, Neil Robertson, Annie Lees, Zita Munsen, Ethel Kennedy, Clarrie Armstrong, Tush McTaggart (Bill), Fred Pope (the baker), Mrs Pope, Mrs Rafferty and Muriel, Mrs Lemon, Vera and Ida, Doreen Southward, Harold Boote, Winnie Duggan, Walter Pattinson, Abbie Lees, Frank Wylde, Mrs Nat Leach, Mrs Sharp, Freddie Keys Jun., Jack Masters, John Docherty, Sid Kennedy, Boysie Warwick, Dorrie Newton, Joyce Hodgson, Mrs Allan, Mrs Reg Jackson, Mrs Isherwood, Mrs Addamson Snr., Myra Warwick, Rosie Lees, Clem Hodgson, Jim Unwin, Bill Clarke, Jackie Duggan, Bill Murphy, Myrtle Manderson, Mrs Glynn, Joyce Morris, Mrs Richmond and Betty, Harold Tallentyre, Charlie Kennedy, Bessie Wilson, Joe Reynolds, Eric Reynolds, George Murphy, Jack Quinn, Ethel Keown, Billy Brown, Sid Morris, Mrs Connelly, Jackie Mann, Mrs Collins, Fred Keys, Tui Bannister, Bull Howard, Dannie Symes and Mrs Symes, Billy Brown (brother of Alec Brown), Jack Forrest, Bill Richmond, Nat Leach, Norman Griffiths, Mrs Kendrick, Jock Bell, Annie Pinn, Mrs Archie Boddy, Jim Clarke, Alf Keown, Ev Lees, Andy Lees, Lizzie Davidson, Jinny Ashurst, June Glynn, Gladys Higson, Fanny Hunter, Alicia Glynn, Alice Radcliff, Mrs Clarke (carpenter's wife), Mag McKenzie, Mrs Wafer, Mrs Leo O'Loughlin, Mrs Mann, Flo Armstrong, Mrs Myrtle Pinn, Mrs Alf Keown, Mrs Dolly Smith, Arthur Gilligan, Freddy Pinn, Dorothy Barnes, Mary Barnes, Stella Barnes, Tunic Barnes, Edna Barnes, Liddy Barnes, Mim Pattinson, Mary Munson and Joan, May Halliday, Janet Hambley, Mrs Ethel Armstrong, Mrs Danny Barnes, Mrs Maggie McTaggart, Mary Hambley (Mrs B. Scott), Noleene Scott, Mrs Howard, Dickie Powell, Mrs Leonard, Mrs Pur-

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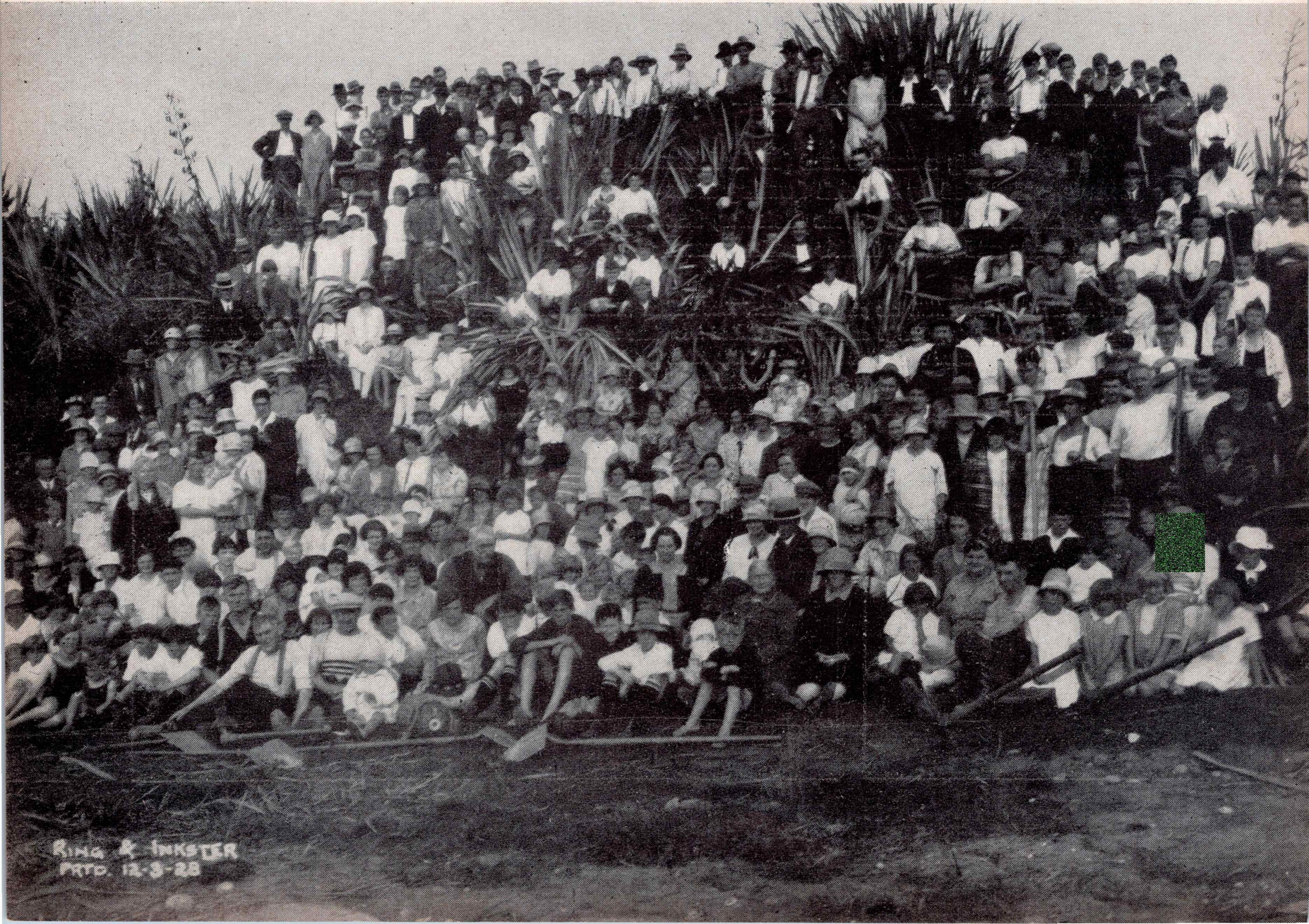


PUPONGA COAL MINE

A small valley looking out into Golden Bay and guarding the approach to the narrow north-westerly spit of the South Island was many years ago the site of a fairly progressive and prosperous mining village called Puponga.

Today, manuka scrub, gorse and only a few older residences surround the site of this mining village, and the mine which was opened in 1899 by the Taylor family.

With the discovery of coal in the valley and adjacent hills the industry gained momentum and it was not long before scows were regularly loading coal from extension jetties built out into channels in the Puponga tidal basin.

Although a small group of coal mines have operated in the district, the No. 1 Puponga mine, pulling coal from dip workings driven a distance of 31 chains, had up to 1917 produced 300,000 tons of coal. In 1917, however, an industrial dispute saw the mine workings flooded, and as power and pumping equipment were inadequate to recover the mine, a decision was made to close down, regardless of the fact that a large area of workings remained standing on coal pillars, and quite an amount of coal remained in the solid.

Up to 1955 small parties without adequate capital tried to reopen the mine, but eventually turned to extracting the easily accessible coal near the mine entries. The stony nature of the coal forced the operators out before the main entries were damaged, but it did appear that the revival of Puponga was not to be.

However, in 1955 Messrs Taylor and Sons became interested, and from information and plans it did appear that the bottom eastern districts of the mine held a large quantity of high, clean, good quality coal.

This time, proper planning to install the necessary costly equipment to reopen the mine was thoroughly investigated. With the necessary capital provided by a Nelson company, they finally installed a 160 h.p. 75 K.V.A. generating plant, and surface channels were concreted to prevent underground seepage of water. In September 1958, further power was available from the Golden Bay Power Board and a 10-stage Mather and Platte turbine pump with a 700ft head, capable of pumping 250 gallons per minute, was also installed.

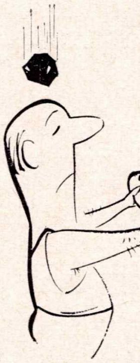
Today the mine is practically recovered and shows good workable areas of coal in the lower eastern sections, but since 1955 approximately 1,460,000 tons of water has been pumped and 3250 tons of stone removed, for 17,000 tons of coal produced.

The mine has now reached the stage for expansion and it is the intention of the company to employ more miners to build up the output quickly.

Although there were many critics who forecast failure in the reopening of this mine, the tenacity and courage of managers and directors to invest and push on with this enterprise deserve unstinted praise as the mine opens out another industry to bring employment and prosperity to the district.

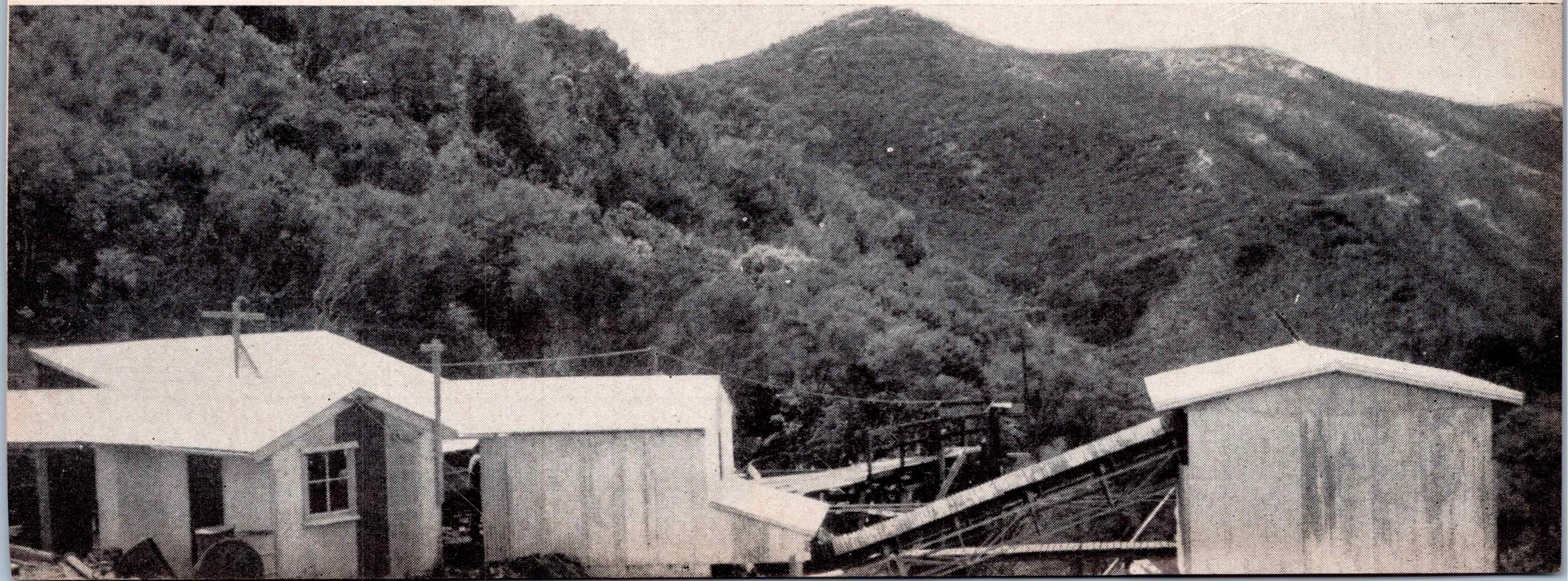
Here is one ghost mining township that will again be rehabilitated. Although there will be no clanging of steam engines nor scows tied up to the jetties, the spirit of old Puponga will live again with the rebuilding of the settlement.

WEAR YOUR HELMET !



A fractured helmet is better than a fractured skull.

(Below) The Puponga Mine showing the bins, belt conveyor, coal crusher and mine buildings.



Nobel reports on :

'EXPLOSIVES IN COAL MINING'

SENSITIVENESS

All explosives supplied for use are sufficiently sensitive for normal requirements, and before an explosive is issued it must satisfy certain Home Office tests as to storage properties, stability and safety in handling. This means that the explosive must be sufficiently insensitive to withstand any shocks which may occur in handling or transporting, but, at the same time, the manufacturer must produce an explosive which will detonate when initiated by an ordinary detonator, and also transmit the detonation wave from one cartridge to another in the shot-hole. The explosive must also retain these properties after it has been stored over a normal period.

The gap sensitiveness of an explosive cartridge is directly proportional to its diameter, hence the largest practicable diameter should always be used. Gap sensitiveness is the maximum gap over which the detonation will propagate from one cartridge to another in a straight line in the open. It is, however, desirable to employ the least possible number of cartridges so that there are as few gaps as possible over which the propagation is needed. Before being sent out, representative samples of the consignment of explosives are tested for sensitiveness.

WATER RESISTANCE

In wet ground it is necessary to choose an explosive which is adequately impervious to water, and gelatines come into this class. Although all explosives are enclosed in wax paper wrappers, powder types will not stand up to pressure of water for any length of time, though in the case of damp holes they will prove quite satisfactory if the hole is charged and fired in reasonable time.

OXYGEN BALANCE

In modern, well-ventilated mines the oxygen balance need be of no concern as all the explosives are officially recommended for underground work and their constituents carefully adjusted so that the gases produced on detonation do not contain noxious fumes. The calculation must allow for the fact that the wrapper takes part to some extent in the reaction, and the composition adjusted so that there is sufficient oxygen to prevent the formation of carbon monoxide but no excess which would lead to production of oxides of nitrogen.

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NE/3/61

MINING SAFETY

MEASURING AIRBORNE DUST

•

New Instrument Tested in New Zealand

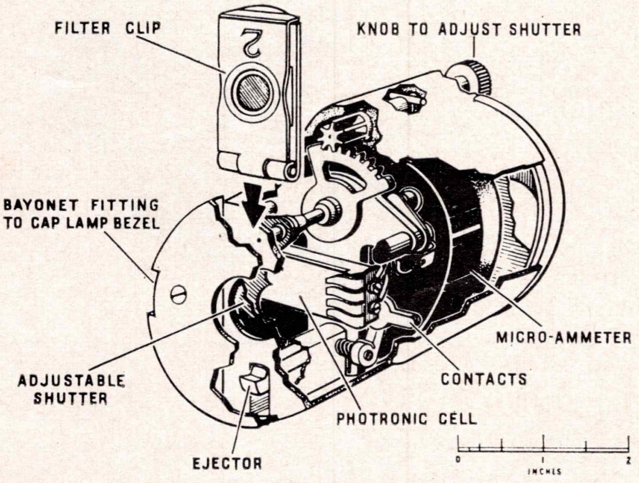
Coal Mining Research at the Otago School of Mines reports this year on a new instrument for measuring dust in the air underground. The device, called the P.R.U. Handpump, is also gaining widespread use in British mines. P.R.U. stands for Pneumoconiosis Research Unit, a research centre in England which investigates diseases of the lung caused by airborne dust.

The handpump simply draws about one-thirtieth of a cubic foot of air through a small piece of white filter paper on which the black stain caused by the dust can be used to assess the dustiness of the place. The depth of stain is measured by a photoelectric cell clipped to the front of a normal cap lamp. The latter was developed by the National Coal Board, Great Britain, and is known as the N.C.B. cap-lamp densitometer.

The instrument has been tested and calibrated using several New Zealand coals in both laboratory and underground tests. The results of the Coal Mining Research Group agree closely with British experience and show that the instrument is suitable for measuring dust concentrations over short periods for most purposes. The design and use of the instrument is shown in the accompanying figures which illustrate its lightness and compactness.

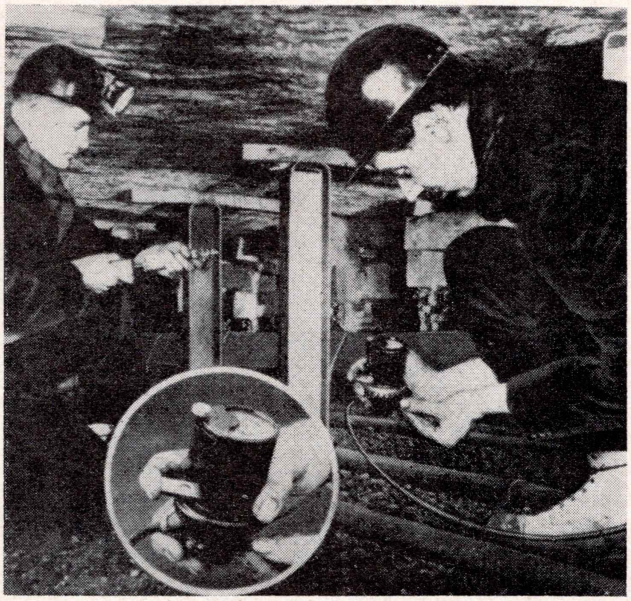
HEALTH IN THE MINES

Robert Reid, journalist and broadcaster, and Dr Gordon Evans, medical adviser to the Trade Union Congress, told of the methods of combating the coalminers' old enemy pneumoconiosis in the mines of Great Britain.



CAP–LAMP DENSITOMETER

The filter-paper clip A is inserted and secured against the rubber sealing ring B by turning the knurled ring C. After operating the handpump, the stain produced on the filter-paper D is later evaluated by a densitometer.

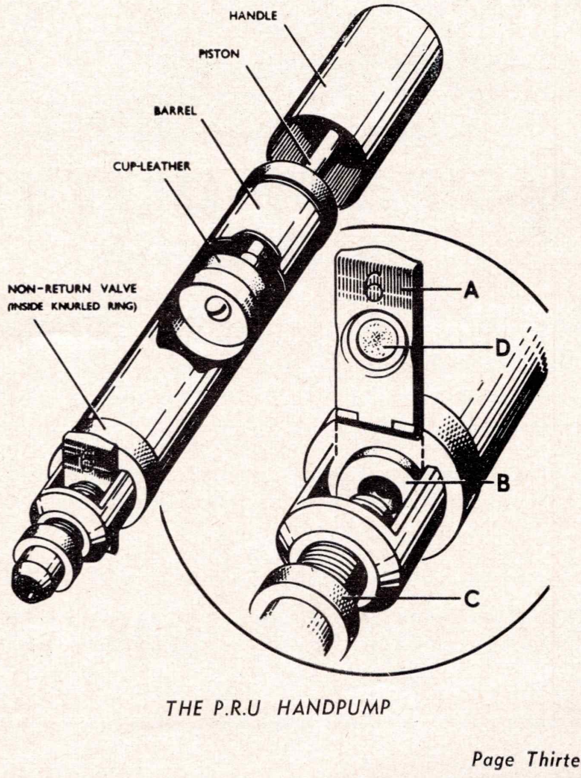


Measuring airborne dust with the P.R.U. handpump and the N.C.B. cap-lamp densitometer.

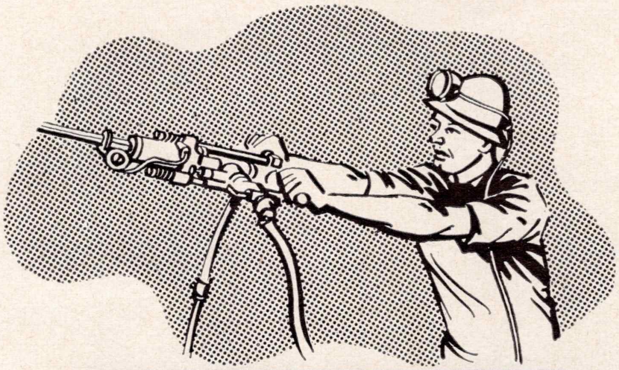
Dust is suppressed at the source by infiltrating the coal seams with water, by having water jets on the picks, and by a daily check on the amount of dust floating about in the air.

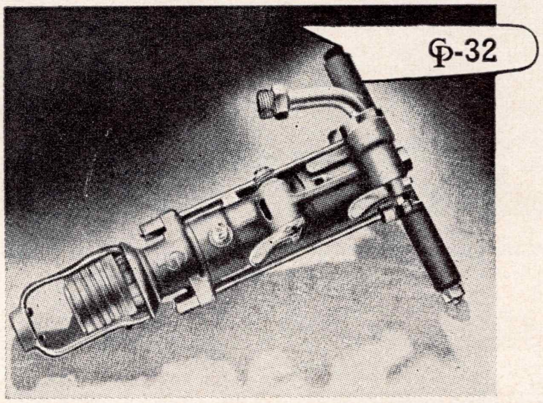
Attention is also given to each individual miner. There are periodic checks of miners who have been working in the mines for some time, and, most important, young men going into the mines have a complete physical overhaul and do not go down into the mines at all unless physically fit.

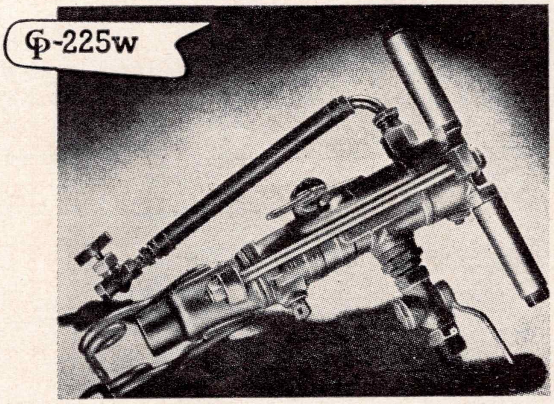
—*from BBC London Letter.*



THE P.R.U HANDPUMP







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for hand held or feedleg operation

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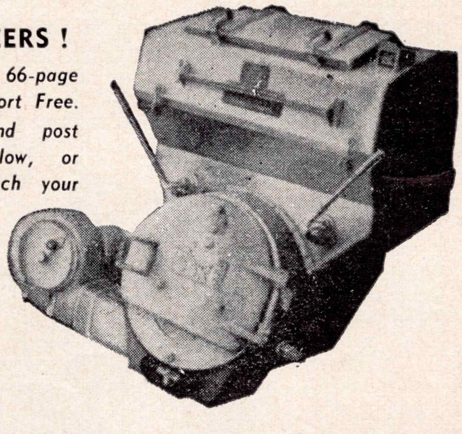

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NAME ....

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....Coal

Goats of the camp at Denniston

AN AMUSING REMINISCENCE OF EARLIER DAYS

THE earliest residential areas at Denniston were adjacent to the Brakehead of the haulage incline to the Government railway at Conn's Creek at the foot of the mountain, approximately 1800 feet below. In the Brakehead area the cottages, shops, and mine-buildings were erected on rock terraces wherever building sites could be arranged, while the Camp area was a subsided block flanking the Waimangaroa gorge escarpment, but approximately 200 feet lower than the main plateau. The Camp area was flanked to the south by a steep rock face and the main haulage roadway to the Banbury mine portal at the far end of the Camp, while the northern limit was the steep slopes of Waimangaroa gorge with high rock cliffs in parts, and the cottage sites were mainly on the cliff side of the access road which meandered to suit the rock contour, the general direction following that of the rope-road haulage.

Many years later the haulage road to Burnett's Face through the Banbury mine had to be abandoned as mining operations caused creep and cliff-drag putting this haulage tunnel out of alignment, and a surface endless-rope road of 1½ miles was constructed, a costly undertaking involving extensive rock-cuttings and fillings across the plateau to Burnett's Face—the change-over being in June, 1904—with branches from Wooden Bridge junction to the Iron Bridge, and Coalbrookdale mines, and this provided transport for upwards of 50 years until the recently installed aerial-ropeway displaced endless-rope haulage.

Difficult access

This surface rope-road deviated slightly from the original tramline to Banbury mine, gradually rising from the bins level by a substantial steel viaduct and then through rock-cuttings, and this also flanked the Camp but at a greater height while skirting the escarpment, and although access to the new rope-road was almost level with the Camp road at the Brakehead, that at the Banbury end was by Jacob's ladder, a rough, steep track with steps in part, mainly used by workmen but at times by the more agile members of the fair sex.

The cottages were of the small gable-roof with lean-to type, with amenities by no means elaborate, consisting of a corrugated-iron shed with shelves as a general-purpose storeroom and washhouse and with the "little-ouse" not, as sung by Gracie Fields, down at the bottom of the garden because the surface was mostly bare rock, but sited over one of numerous crevices which provided sewerage.

Family additions

Many of these cottages and sheds were wired to the solid rock, and although initially of three or four rooms, repeat visits by that mythical bird the stork resulted in some of the lean to's being extended to furnish necessary accommodation. Two I noticed in later years with repeat extensions resulting in ceiling height at the back being little more than head clearance, and the back wall almost to the cliff edge.

It was in the Camp in one of these humble cottages that the writer first saw the light and like many more born in the settlement rose to responsible positions.

Many tales can be told of early Denniston life, some tragic, others amusing, and as the goats figured in a number of incidents, and incidentally young goat is equal to or better than lamb, I have chosen for this narrative a humorous event which created amusement for the children but some additional work for mum. Approaching darkness the goats, preceded by scouts, from the steep bush-clad slopes below would emerge and anything from washing on the lines to pit boots would vanish, with sheds broached and depleted of anything edible.

Our potatoes had been pillaged so dad, retaliative, prepared a waddy and with the shed door ajar as zero hour approached with us kids all excitement a disturbance in the shed spurred dad into action while we kids broke evens to join in the fun. Dad, armed with the waddy, entered quietly and closed the door as the goat raised his head from the vegetable box with a carrot in his mouth, but unfortunately for dad it was an old billy, which dad soon discovered was a very disagreeable customer in the confined space, having the additional advantage of billy-goat aroma, which this bloke possessed in abundance, much to dad's discomfort, judging by the coughs emitted.

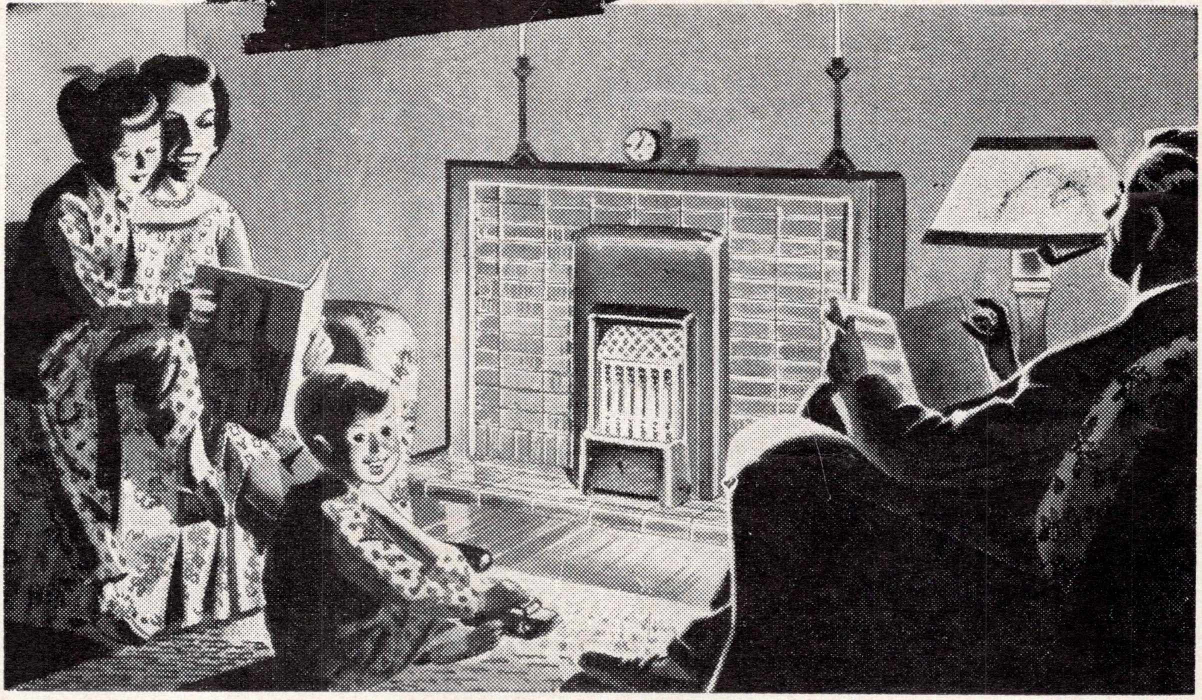
The battle begins

With dad fresh and the billy's mouth stuffed with carrot when surprised, the repeated waddy thuds accompanied by loud "baars", bulging sides and rocking of the shed as the goat, with retreat cut off, decided on evasive footwork it appeared that dad's initial attack was piling up the points, but following a series of spillages from the shelves with contents strewn around the floor impeding dad's footwork there was a lull as dad, following a loud grunt and his pellucid description of goats in general and this billy in particular, went down for a short count to regain his wind after the billy had executed a flying tackle to dad's bread-basket.

(continued on page 26)

INSTANT WARMTH

- SO CLEAN
- SO ECONOMICAL
- SO RELIABLE



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THE GAS ASSOC.
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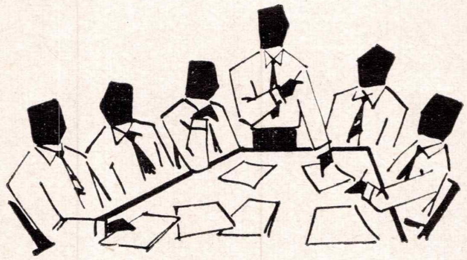
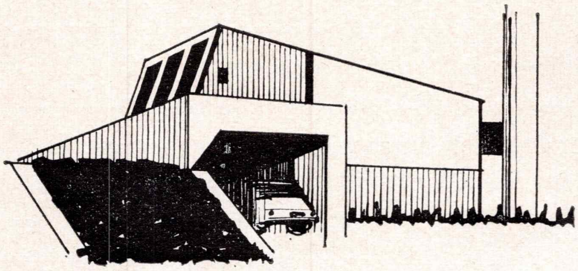
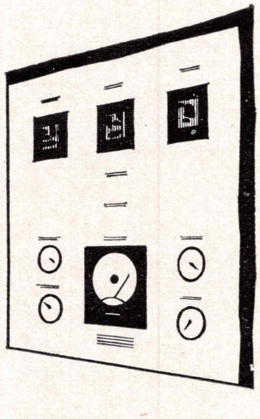
TECHNICAL ADVISORY SERVICE



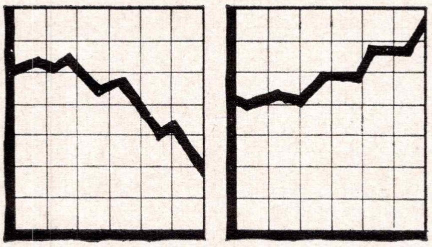
COAL STORAGE



INSTRUMENTATION



BOILER HOUSE ECONOMY



To co-ordinate the State with the private companies and individuals requires more than just the organisation of an association. Tact, persuasiveness, understanding, intelligent handling and sometimes outright bullying all had their place in the formation of C.A.S.A., but there have been no recriminations, and even major differences have been set aside in the attainment of the great goal for the common good.

Meetings were called under the auspices of the Council and the leaders of the industry were given the opportunity to help in the organisation of the Coal Advisory Service Association.

It was not by chance this title was chosen. In addition to conveying the exact function of the association, the initials in the Italian language mean "Home."

The first director

One of the first necessities was to find a director who could take over the complete organisation of the new association. Advertisements were placed in papers in England, Australia and New Zealand, and some of the replies came from highly qualified men.

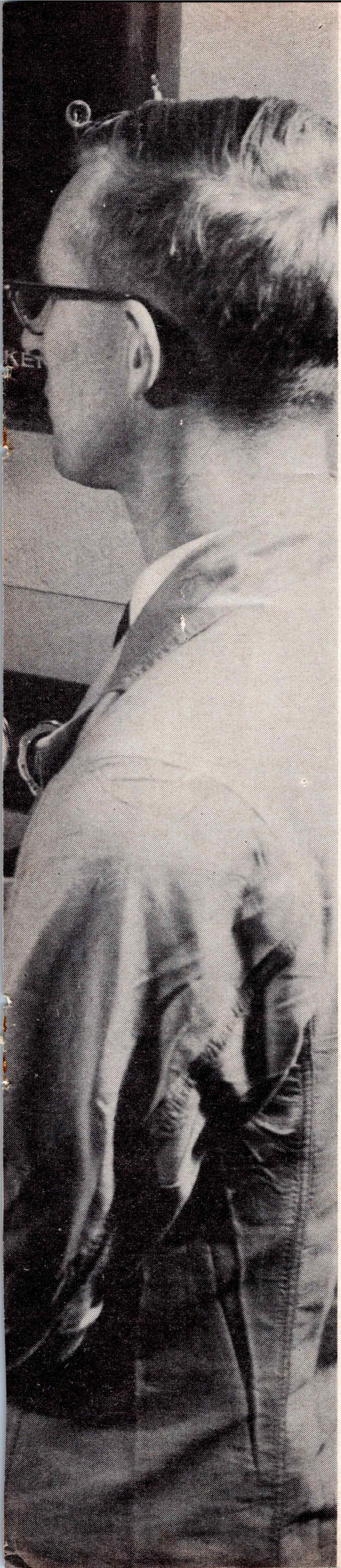
The choice for director fell upon Mr. Berwyn Jones, chief engineer to the Otago Hospital Board in Dunedin, whose qualifications, practical experience and knowledge of New Zealand conditions pointed him out as being a candidate most suitable to the position.

Mr. Jones, whose friends call him "Taffy", has a man-sized job ahead of him, but he'll have the co-operation of the whole industry behind him.

Duties of C.A.S.A.

C.A.S.A. is formed. It is in operation now. Company managers, engineers, architects, builders and contractors and even householders have the privilege of calling upon the services of C.A.S.A. for help with any problem on any of their coal-burning appliances, and they will receive the best advice that the combined efforts of research scientist, fuel engineer and tradesman can supply.

This is the greatest advance in the coal industry to be made in this generation and will fill a long-felt gap in the organisation.



The Story of C.A.S.A.

For many years the coal industry felt the need for a central advisory institution that could help in the problems associated with solid fuel installations. Coal-fired boilers were operated by firemen who did their best with the equipment available. But there were no trouble-shooters, no one to tell them if their boilers were efficient, and, if they were not, to investigate the furnaces and the boilers and advise on how to increase efficiency to get the greatest value from the coal used.

That is all changed now. Modern equipment has taken over from the old hand-stoked boilers, qualified engineers have taken over from the old coal shovellers, efficiency in coal-fired boilers has reached a new high, and, behind it all, to help, inspect and advise, stands the new coal colossus—C.A.S.A.

Although it is a magnificent achievement, there is really nothing surprising in the establishment of the Coal Advisory Service Association. It follows naturally the sequence of events in the coal trade, when it was realised that the rival fuels were making such great inroads into the field that previously belonged to coal. One of the main reasons that coal lost ground was the fact that the other fuels provided a *service* that the coal industry lacked.

While coal was King the industry took no heed of the future. Strikes, transport problems and all manner of obstructions stood in the way of progress. While some, perhaps were necessary, some demands were also unreasonable, and because coal was a necessity the consumer was often held to ransom.

Electricity and the great hydro-electric schemes lessened the demand for coal. Then the oil companies made inroads into preserves that were once considered exclusively those of the coal industry. Whether they approved or not, the various factions were made to realise that complete unity within the industry was the only answer to the outside danger, and so, when the idea of C.A.S.A. was proposed, they were ready not only to accept it but to welcome it as one of the greatest projects ever introduced in the history of the coal industry in New Zealand.

Private ownership versus State

The coal industry is unique in its set-up. There are private and co-operative mine owners competing with the State mines, the coal is transported on State railways and by private shipping companies, it is wholesaled by the wholesale coal merchants and by the State, and retailed and delivered by smaller retail coal merchants and the State Coal Depot.

The antecedent to C.A.S.A. was the Coal Information Centre, and that proved that a central organisation was needed desperately.

It was the men of vision who then began to press for a larger autonomous organisation that could serve the coal industry on a much larger scale.

The Coal Mining District Welfare and Research Council then took the lead. At their disposal were the mining engineers, the scientists, the publicity men and the already established Coal Information Centre, and so they had what was needed to found the organisation that could meet the requirements of the industry.

A fuel engineer discusses a combustion efficiency check with an institution engineer.

HOW THEY MAKE PAPER

(continued from page 9)

and chemical ingredients are added and the eventual texture of the sheet is determined. Beating time varies according to the density of the paper required. The stuff must be longer in the beaters for a thin sheet than for a heavy one.

The beaters are oval-shaped tubs, about three feet deep at one end and four feet at the other, with a partition running through the centre lengthwise. The beating roll is fitted with metal bars placed one inch apart and projecting about an inch from the surface of the roll. It operates on one side of the partition on a bedplate after the fashion of a water wheel. The bedplate has metal bars similar to, but closer set than those of the beating roll, and is placed on an upward slant just under the roll. With this roll in motion the stuff is forced round the tub at a slow pace. When the stuff is first filled into the beaters with about one-third water, the roll is kept some distance above the bedplate, and as it becomes beaten it is gradually lowered until it is churning within a fraction of an inch above the bedplate.

Immediately the beating process is completed, a valve at the lower end of the beater is opened, allowing the pulp to be washed through pipes into chests situated under the beating floor. It may then pass through refiners to ensure that no lumps of hard fibres are left, then into the delivery box of the machine where it is further churned up and thinned with water until it runs through strainers on to an endless thin wire mesh gauze in almost liquid form. Towards the end of the thin mesh, suction is obtained through the wire passing over a set of boxes, from which a pump constantly draws excess moisture out of the now soggy paper. It is then pressed under a felt-covered roll (couch roll) and on to the first press felt. At any time while the paper is still wet, a felt can be installed for marking the paper, as in the case of the familiar striped wrapping, and it may also be watermarked with any distinctive design which is visible when held up to the light.

From the first press or wet felt, the paper, now of weak strength, passes through the second press felt and may also be ribbed to give a striped effect. Next comes the drying process. The paper passes between heavy endless felts and the surfaces of steam-heated cylinders.

Of the two types of paper-making machines in general use, one has 28 drying rolls of about five feet diameter, while the other process operates only one large cylinder over which the paper passes. At the end of the drying process, the paper is pressed or nipped in calender rolls (chilled iron rolls of very even surface) and is wound on to spindles in large reels. In the case of high quality papers, the drying is achieved with the use of as little heating as possible since quick drying tends to burn and weaken the fibre.

The paper is now made, but is far from being the finished product as required by the retailer. In the finishing department much more machinery is brought into use. If the merchant requires a sheet that is hard and glazed on the surface, the reels are put through super-calenders, a stack of rolls with rollers of composition and iron alternately placed, and can be given as many nips as are necessary. It is then to the cutting machine if sheets are required. Circular knives on this machine cut the paper to the desired width, while a rotary knife, the full breadth of the machine, chops the lengths. The drive for the chopping blade is geared so that the knife may be made to revolve slow or fast according to the lengths of the sheet to be cut.

In the case of shop counter rolls, etc., the process is simpler, only the slitting knives being in use. The knives are fitted like collars around a bar across the machine, and can be placed on counting benches to be inspected and counted into quires and wrapped in reams or half reams to suit the weight or substance of the paper. Rolls are wrapped and labelled for delivery. The paper is now ready for the consumer, although storage for some time improves the quality of the paper through maturity.

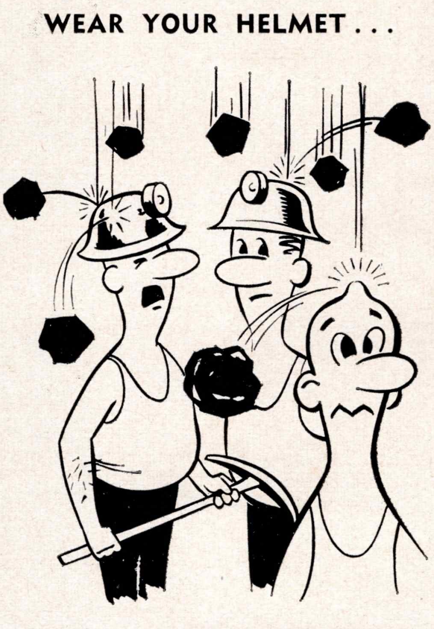
It is an interesting thought that the paper in which your everyday groceries or meat is wrapped, as well as paper in daily use, in all probability came from the New Zealand Paper Mills in Mataura.

(continued from page 10)

nell Snr., George Pinn, Mrs Molly Pinn, Tommy Merryman, Mrs Merryman, Steve Merriman, Bobby Merriman, Eleanor Shackley, Maggie Howard, Constance Wylde, Isa Lees, Anzac Lees, Mrs Teddy Ward, Bill Southward, Myrtle Bowden, Nancy Ogle, Mrs Charlie Kennedy, Tom King, Vida Shaw, Mrs Shaw, Mrs Fred Keys, Add Miller, Jocie Miller, Bernard Miller, Patty Heslin, Violet Quy, Foxie Steele, Olive Winstanley, Patty Miller, Bill Richmond, Hector Scott, Mavis Mann, Molly Pinn, Reg Jackson, Keith Southward, Harry Southward, Jack Greening, Dick Glynn, Maggie Duggan, Stan Gilligan, Mrs Gilligan, Allan Shackley, John Darwell, Edward Kendrick, Mrs E. Kendrick, George Kendrick, Mrs G. Kendrick, Harry Kendrick, Cliff Shackley, Thisa Shackley, Bill Glynn, Mrs Greening, Albert Greening, Joyce Greening, Nancy Greening, Elsie Pattinson, Tom Miller, Mrs Miller, Bobby McTaggart, Ron McTaggart, Jock Bell, Tom Collins, Mrs Collins, Bert Collins, Mrs B. Collins, Billy Hambley, Nick Hambley, Rene Wick, George Kinsey, Mrs Oakley, Bill Rafferty, John Duggan (Mocky), Mrs Duggan, Jack Tallantyre, Charlie Newton, Ted Ward, Alfie Ward, Bill Dalzell, Mrs Dalzell, Mrs Hunter, Mavis Mann, George Long Jnr., Bill Amos, Dorrie Nesbit, George Newton, Stan Olderog, Fred Bansgrove, Kate Garvey, Bill Warburton, Mrs Warburton, Jim Ashurst, Mrs Ashurst, Bessie Maskill, Laura Bannister, Mary Howard, Rachael Mundy, Mrs Warwick, Alec Brown, Dorothy Ward, Mrs Val Armstrong, Alec Campbell, Jack Clelland, Johnny Lythgoe, Nina Goodwin, Ike Mossop, Eileen Almond, Ted Cain, Adam Boote, Sam Maskill, George Steele, Wally Steele, Billy O'Neil, Albert (Major) Ward, and Jim Smith.

That is all the names we have, but we have a strong feeling that some of these names have been misspelled or duplicated, and others missed altogether. To those people who have been in any way misrepresented we apologise and ask you to please forgive us our trespasses.

★ ★ ★

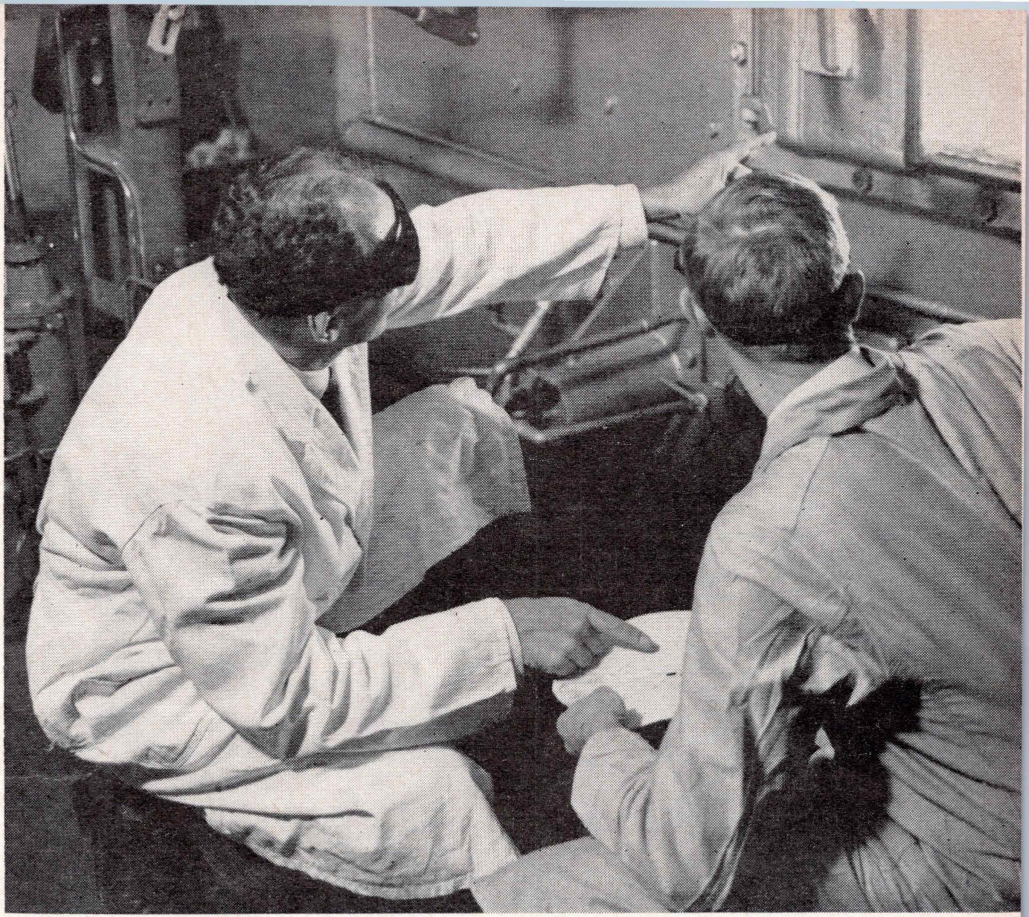

WEAR YOUR HELMET . . .
. . . it's stronger than your head!

Future of C.A.S.A.

So much for the history of C.A.S.A. Now for its functions and future. In New Zealand are many coal-fired appliances, both industrial and domestic, that are not producing efficiently or to capacity. It is those installations that will reap the benefit of C.A.S.A.'s advice. A letter to C.A.S.A. brings immediate results. If a boiler is not efficient, there is a reason. It might be a simple one, too. Sometimes the problem can be tackled by correspondence, but more often a fuel engineer will call, inspect the plant, discuss the problem with the resident engineer and then give a considered opinion as to how the efficiency of the boiler could be improved. This could lead to saving the cost of a new boiler.

And the service of C.A.S.A. is free to all industrial and domestic users of coal.

It has been found that boilers that have been considered obsolescent and inefficient have often, by some minor technical adjustment, been improved to such an extent that replacement became unnecessary. In other cases the engineers have no idea of the degree of efficiency their boilers can attain and so are unknowingly wasting the company's money.



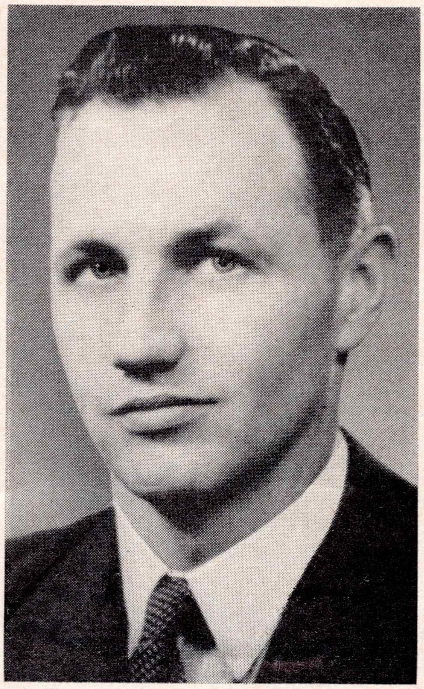
A fuel engineer relates the data obtained from instruments to actual operating conditions.

These are the people C.A.S.A. can help. C.A.S.A. is there in an advisory capacity only, and does not in any way come between any company and its customers. So, any person with any problem connected with coalfired boilers, solid fuel appliances, smoke and fume nuisance, space heaters, open fireplaces or anything related to the coal industry, is welcome to write to "The Director of C.A.S.A., P.O. Box 3041, Wellington" for advice or information about his equipment.

And don't forget, *the service is free!*

THE EXECUTIVE OF C.A.S.A. (From left): Messrs C. H. Williams, R. C. Wallace, G. Brunt, P. M. Outhwaite, W. L. Kerse, B. Jones. (Absent, Mr F. Archer.)

A Message from the Director of C.A.S.A.



MR. BERWYN JONES
A.M.I.Mech.E., A.M.N.Z.I.E.
Director of CASA

Despite all its detractors, coal still is and should remain a good economic fuel for many years, and can compete with all other forms of fossilised fuel. Perhaps one day nuclear power will replace all other fuels for many purposes. Coal will, however, still provide a raw material for industry and for many years will compete, too, as a source of energy.

Any fuel is only as good as the plant in which it is used. Years ago coal was so cheap and formed so small a part of the cost of the finished product that the production and use of steam and hot water received scant attention from management.

It is the aim of Coal Advisory Service Association to assist all users and potential users of coal to attain the maximum benefit from the coal they use. Our aim is the maximum number of satisfied users of coal, not clients using the maximum amount of coal.

Many coal consumers are old established concerns whose plant has grown with the firm. Coal Advisory Service Association offers to such concerns advice and assistance on reappraisal of their plant. Firms contemplating the establishment of new factory premises which require fuel are offered advice on the advantages coal-burning plant has to offer.

It is not infrequently a pleasant surprise how great an increase in efficiency can be attained with a relatively small expenditure.

Much loss occurs before the coal even gets to the grate, through poor storage conditions. How often is it discovered that physical stocks and book stocks cannot be reconciled through errors in estimation. With this type of problem Coal Advisory Service Asociation can offer solutions.

The most competent engineers are usually the busiest. How difficult it frequently is in the rush of coping with the myriad problems facing the busy executive to view one's own plant objectively and give it the detailed check that even the best plants periodically need. Coal Advisory Service Association offer to all interested persons, firms, organisations, etc., the services of competent experienced engineers to examine and report on their plant.

Mr Berwyn Jones, who has been chief engineer to the Otago Hospital Board, Dunedin, for the past six years, has taken up his position as the first director to the new Coal Advisory Service Association at the head office in Wellington.

Mr Jones is registered as a professional engineer in New Zealand, he is an associate member of the Institution of Mechanical Engineers (Great Britain) and an associate member of the New Zealand Institution of Mechanical Engineers. He holds the College Diploma and the Higher National Diploma in mechanical engineering. He was brought up in the coal mining districts of South Wales, and qualified at the South Wales and Monmouthshire School of Mines and Technology. He served four years in the army, being demobilised with the rank of captain in R.E.M.E. in 1946.

Arriving in New Zealand in 1955, he held the position of chief engineer to the Otago Hospital Board until his appointment to CASA.

What sort of things will these engineers look at ?

Combustion conditions : First a check on conditions existing. If they are not satisfactory he will check damper operation, accessibility of controls to the firemen, evenness of firebeds, leakages around brickwork, doors, edges of drums.

Next he may check your ash and have it analysed for coal being carted away from your boiler house. If there is such black gold in your ash, he will seek the cause. Excessive wear in the links of a chain grate stoker may be the cause, or the amount of moisture in the slack may be too little, allowing the fires to fall through too easily.

Leakages of steam and water can be efficient thieves of fuel. It is not necessary for boilers and equipment to resemble a miniature Rotorua for there to be worthwhile savings available. Leaking blowdown valves or excessive blowdown can waste very appreciable quantities of coal.

You may well say that all such tests can be carried out by your own staff. Should you prefer to do so, Coal Advisory Service Association can help with advisory literature and with loan instruments for checking.

Instruments are an essential part of any modern plant. Without them efficiency must be a matter of conjecture. In addition to test instruments on loan, Coal Advisory Service can offer sound advice on the appropriate choice of permanent instruments so that constant check can be kept on your plant's efficiency. Instruments may be indicating only to assist the boiler operator or automatically recording the information necessary to assess the plant efficiency. In either case the keeping of appropriate records of consumption and performance are an essential tool of management and invaluable for future planning.

So far we have considered the boiler house. In the use of the heat produced therein, whether as steam or hot water or hot air, there is frequently as great a scope for economy as in the boilers themselves. It is frequently overlooked, for example, that the heat lost per annum from 100 feet of unlagged 1-inch steam pipe carrying 100 lb./square inch steam for 12 hours a day, 250 days a year, would take about 9 tons of coal with a B.T.U. value of 10,000 B.T.Us. per lb., say a Southland dross. It does not need many unlagged lengths of pipe to add up 100 feet.

Condensate which is not returned to the boiler can lead to great wastage. To allow condensate from a piece of equipment using 1,000 lb. of steam per hour to run to waste could lead to wastage of about 1 cwt. of coal per 8-hour working day. Since steam can give up its heat only on changing back to water, efficient steam traps are essential to ensure that such water is removed without leakage of steam. To get the benefit of the temperature available with steam at any pressure, proper means must be provided for removing any air present. The steam consumption of many items of plant such as drying tumblers, rolls, etc., can be unnecessarily increased if air is allowed to remain in steam spaces. The services of Coal Advisory Service Association extend to such problems if required, as it is the aim of the Association to ensure that all coal consumers gain the maximum benefit from the coal they burn.

Information on all the problems mentioned is available from many sources, textbooks, publications of research organisations and learned societies and in literature supplied by commercial firms. It is, however, felt that the need exists for a clearing house for all this available information; and Coal Advisory Service Association aims at supplying this need. You the consumers of coal undoubtedly from your accumulated experience possess knowledge of solutions to many problems concerned with the efficient use of coal and, with your permission, Coal Advisory Service Association would be pleased to make this knowledge available to others.

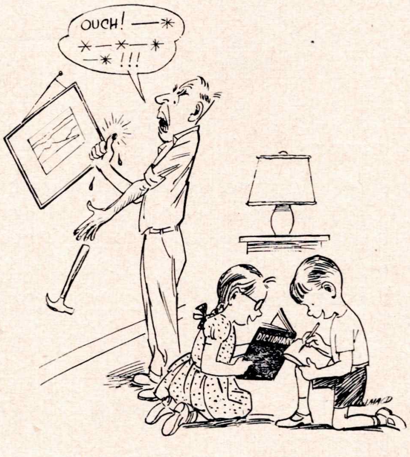
No person or body possesses all the knowledge and experience available in the world. If the solution to any problem submitted is not available within the organisation it can be sought outside.

It will help to disseminate information on the excellent work being done by New Zealand's D.S.I.R. in its fuel laboratories and comparable institutions elsewhere.

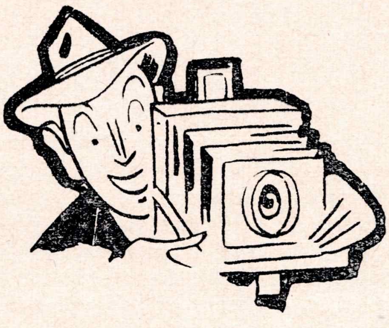
Coal Advisory Service Association can only be successful with the co-operation of the consumer of coal. Our aim is to serve but we can only prove our ability and willingness to help if requested. The whole industry mining and distributing coal is behind us. If you require help, a letter, a telegram or a telephone call will gain it for you.

—Berwyn Jones.

The CASA Symbol of Power



"You write 'em down and I'll look 'em up!"



Have you an INTERESTING PHOTO?

▽

Coal will pay you one guinea for any photo interesting enough to be reproduced in the magazine, but EACH PHOTO MUST BE ACCOMPANIED BY THE STORY OF CIRCUMSTANCES SURROUNDING THE PICTURE. It could be the story of how the picture came to be taken, of the difficulties of obtaining the shot, or it could be an old timer photo of places or people. If you have an old photo (preferably with the people named), send it in. It might earn you a guinea, and it certainly will be of interest to other readers. An example of one winner is the picture of Neptune in this issue, where the contributor sent her entry in verse. We cannot all do that, but you send in your photo and story, and we'll judge whether it will be of interest to readers. Anyone is welcome to enter. With co-operation, this section could be made into one of the most interesting in the magazine.

SEND YOUR ENTRY IN TODAY.

Coal Magazine is widely read

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Proof that Coal is a widely read magazine came in the form of a letter from Dr. Val Armstrong in London, to a former schoolmate Mr. Harry Mathieson at Ohai. Dr. Armstrong saw a photo of a "little older" Harry in the September issue of Coal, and wrote to renew old friendships.

Dr. Armstrong has represented the D.S.I.R. overseas for eleven years including three years in Washington, U.S.A. He is now senior scientific liaison officer for D.S.I.R. in London.

His many friends in New Zealand will be pleased to know that he expects to return to N.Z. towards the end of next year.

NEW *C.A.S.A.* INFORMATION BOOKLETS

One of the first services CASA has to offer is the issue of a new series of booklets dealing with all aspects of boiler plant and coal-fired appliances. These invaluable booklets are available free to all factory managers, boiler engineers and technicians, and should be requested from CASA. They have been adapted from similar English publications and are attractively printed in a simple, easy-to-read style. Each cover is in a different colour to assist in easy identification.

CASA BOOKLET 1. *How to look after a boiler plant.*

This gives a comprehensive yet simplified story from the method and condition of firing to the systematic keeping of records. Draught control, cleanliness, valves and joints, lagging and insulation, housing, efficiency, feed pumps and instruments all have their place in this booklet; and not the least important is the section on boiler house staff and their treatment.

CASA BOOKLET 2. *The wetting of slack to assist combustion.*

This covers many aspects of slack conditioning and how to achieve it. This booklet is illustrated with graphs.

CASA BOOKLET 3. *Air for combustion.*

To have efficient combustion the principles involved must be understood. This booklet gives advice on this subject, as well as methods of stopping infiltration and the control of air supply. It also has a section on control with forced draught furnaces.

CASA BOOKLET 4. *The handling and storage of coal.*

A most important part of the boilerhouse is the storage bins. Information in this booklet helps in deciding the type of coal bins that are most suitable for a boilerhouse. It gives advice on coal stocking, and the measurement of coal consumption, and gives examples of how to measure coal stacks of different shapes and sizes. It deals with overheating of coal in stock and advises on coal segregation and blending.

CASA BOOKLET 5. *The installation and maintenance of boilerhouse instruments.*

This is a very valuable booklet for all engineers. It covers, as its name implies, the installation and maintenance of boilerhouse instruments. It is diagramatically illustrated and full of valuable and interesting information.

CASA BOOKLET 6. *The maintenance of industrial boiler plant.*

This booklet deals with causes of low boiler efficiency, workshop and equipment, exclusion of air leakages, flue gas, short circuiting, insulation, pumps, fans, steam jet forced draught furnaces, mechanical stokers, packing and jointing, starting up and shutting down boilers, and how to assess the thermal efficiency of the plant.

CASA BOOKLET 7. *Save coal in the boilerhouse.*

Operating conditions, excess air, unburnt coal or gases, surface losses, steam and water losses are all dealt with in this booklet. A long section covers coal economy hints that can save factories many tons of coal in a year of operation. Mechanical stokers, travelling chain grate stokers and even hand firing all receive attention.

These booklets should be in the possession of every boilerhouse operator and they will be sent free of charge upon application to:

The Coal Advisory Service Association,
P.O. Box 3041,
WELLINGTON.

Send for yours without delay as supplies depend upon the demand.

Official N.Z. Booklet of Coal-fired Industrial Boiler Plant

This extremely important 70 to 80 page booklet to be published for CASA will contain advertisements of nearly all firms in any way connected with the coal industry and coal-burning equipment, as well as information of value to all users of coal.

This booklet will be distributed to all interested firms, engineers, and factories using coal-fired boilers. It will have an extensive coverage and is expected to become a "coal-users' Bible".

As it will be the most complete book of its kind ever published in New Zealand, manufacturers and distributors of any apparatus connected with coal-fired equipment who have not already taken space are recommended to do so. For full details write to "The Publisher, Official N.Z. Booklet of Coal Fired Industrial Plant, C.P.O. Box 2990, Auckland".

As time is running short, those interested should write for information immediately.

COAL PRODUCTION FIGURES

The coal production figures for 1960 as released in the Mines Statement are for:—

OPENCAST:

Output, 1,120,013 tons; men employed, 467; tons per man employed, 2,398 tons.

UNDERGROUND MINES:

Output, 1,892,030; men employed underground, 2,764; tons per man underground, 685; men employed on surface, 1,070; tons per man on payroll, 481; and all mines output, 3,012,043; men employed, 4,301; tons per man employed, 685.

Imported coal amounted to 132 tons and 18,156 tons were exported, leaving the net amount available for consumption in New Zealand, of 2,994,019 tons.

THE MINER

Deep in the earth his work is done,
The miner.
Seldom he sees the noonday sun,
The miner.
Coal is his work, his livelihood,
Coal is his life and coal his blood,
Coal dust in his very food,
The miner.

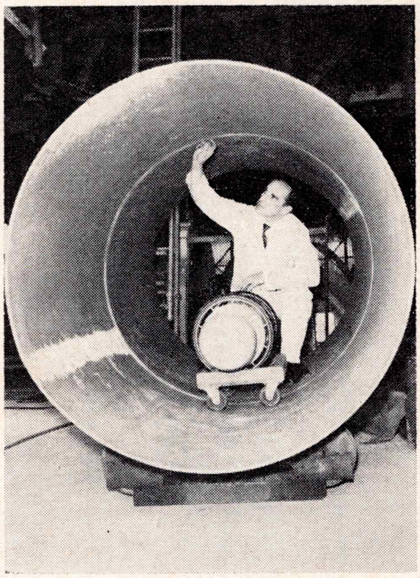
With honest toil his brow is wet,
The miner.
A powerful body bathed in sweat,
The miner.
Toiling, toiling through the day,
Hard in his work and hard at play,
Ready for trouble, come what may,
The miner.

Ever there's danger lurking near
The miner.
Danger from gas, and air not clear,
For the miner.
Danger if the roof should fall,
Danger from a crumbling wall,
And, who's to worry? Least of all
The miner.

But, should you e'er in trouble be,
Oh miner,
Who has the generosity?
The miner.
Who will listen to your call
For assistance? Give his all?
The truest comrade of them all,
The miner.

And, if he lived his life again,
The miner,
Despite the toil, the sweat and strain,
The miner,
Ask him as he passes by,
"What's the life you'd wish to try?"
There would be but one reply,
"A miner."

SCIENCE helps Industry



Mr H. G. Fischer of Auckland examining the welding of a new boiler with his powerful portable X-ray machine.

In the days when Casey Jones mounted the footplate of his engine, and the Robert E. Lee was running late down the Mississippi, enthusiastic engineers used to wire down the safety valves, pile on the coal or wood and watch the hand of the steam pressure gauge go soaring above the danger line. The eventual result was, of course, an exploding boiler, and the fatalities and injuries from this cause were often high.

But it was not always the high steam pressures that caused the tragedies. Often the reason was a fault in the boiler itself that remained undetected until under even normal presssure it gave way. This state of affairs continued until the assistance of science was called for, and from that time the bursting of boilers through faults in manufacture was almost eliminated.

There are only a few boiler makers in New Zealand, but their work is as strictly examined as that of the largest overseas firms.

In Auckland is Mr H. G. Fischer, who operates a private laboratory service. He has a convenient X-ray machine that he transports around with him for inspection of any metal that requires testing, or is suspected of any weakness.

Testing boilers

When a boiler is welded, Mr Fischer subjects the welded parts to a rigid scrutiny, using both gamma and X-rays to examine inch by inch the apparently smooth joins that convert sheet steel into tubes and cylinders. Generally he uses X-rays for the examination of thin or light metals, and brings in the radio-active isotopes and their gamma rays for heavier metals.

His compact portable machine produces 250,000 volts compared with the 80,000 volts used in chest X-ray machines. The 250,000 volts is fully effective in up to three-inch steel, but special isotopes can be used to test up to eight-inch thickness.

The extension rod of the machine is traversed over the underside of the weld, and any faults are recorded on film fastened to the other side of the join.

Protection from radiation

To protect himself from radiation, Mr Fischer carries a Rontgen register, which looks like a fountain pen but actually records the amount of absorption of rays into his body. A maximum of .3r a week is allowed.

Mr Fischer is a skilled radiography engineer, and not only attends the Auckland Hospital Board's X-ray plant, but is also consulted in aircraft radiography where metal fatigue is suspected. Steel structures on the Auckland Harbour Bridge have also been under his scrutiny.

Another scientific testing device is used at the Meremere steam power station, where particles of steel are magnetised and a solution containing them is applied to the suspected areas. Particles in the solution gravitate to any cracks or flaws and the weakness shows up immediately.

It is in this way that science is used to its greatest advantage in testing, developing and improving the tools of industry. It also helps to make work safer for men who keep the boilers working.

★ ★ ★

GOATS OF THE CAMP

(concluded from page 15)

On resumption, judging by the lessened "baars" and more frequent grunts and curses it appeared that dad had lost his waddy and that the billy had abandoned fleet footwork for aggression with flying tackles, while dad's lack of training in billy-goat aroma was beginning to tell when a further lull and muffled "baar" indicated that dad, a reasonably good wrestler, had secured a strangle-hold—as revealed later he had grabbed the horns and was "purrin" goat's ribs in genuine "Lanc" style while the billy emitted piercing "baars" as each kick connected. During this rough-and-tumble the door burst off its hinges and a very enraged billy with a parting kick from an equally angry dad upended mum and scattered us kids as it dived for the bush.

Dad emerged perspiring freely and blowing like a winded colt, sat down with forearms resting on his thighs to recover his wind, while mum, examining the shambles inside the shed, doubted if dad's solution of the goat menace was the logical procedure.

It was as dad partly recovered, following a remark from my younger brother — "By gosh, dad, that billy won't come back, he'll die 'cause you've kicked him off his horns"—realized that he was still unconsciously firmly gripping a horn in each hand, the failure of which had separated the contestants with mutual relief.

SENIM.

P.S.: Should the writer's spelling "baars" be questioned, this is billy-goat language, not the gentle "baa" or "ba-ah" intonation of the nanny or the kid-goat's "ba-a-a" with tremulous effect. The billy, according to rank (dual meaning) or importance in the herd and when angry, rolling his R's.

tell us a story

Because of the number of very good stories submitted for "Tell Us a Story" competition, we have decided that in fairness to all contributors, in future there will be no placings, but 10/6 will be paid for all stories published. So continue to send in your stories. They all help in making your Coal Magazine interesting.

Back in 1933 the staff of the Otaki Dairy Company were leaving off work for the day. There were six of us without the boilerman, and just as we were coming out the door, the latter rushed past us. White as a ghost and obviously badly frightened, he yelled "Run for your lives".

As one man we ran and despite my corpulency I soon established a clear lead.

When shortness of breath compelled us to stop we asked him what was the trouble. He replied that, when he was banking the fire, he saw on the coal he had just thrown in a large piece of gelignite with a fuse attached.

It was some time before we found sufficient courage to go back and investigate. It turned out to be a large piece of fire clay with a short length of burnt out fuse adhering to it.

None of us ever claimed a record for the 440 though I'm sure we must have achieved one that day.

[Mr James Warnock has been a regular contributor to Coal, and, as we understand he is to retire this month, we ask him to accept our best wishes for a happy and comfortable retirement at Greenmeadows. This should now give Mr Warnock more time to write more of his inimitable stories for Coal.]

Ken had just started work inside the mine. He was put with an older man doing different jobs. This man said to Ken "We'll couple up this hose here for the boring machine". Having got the hose ready, he said "We'll give it a good blow through and blow out the dust and dirt inside the hose".

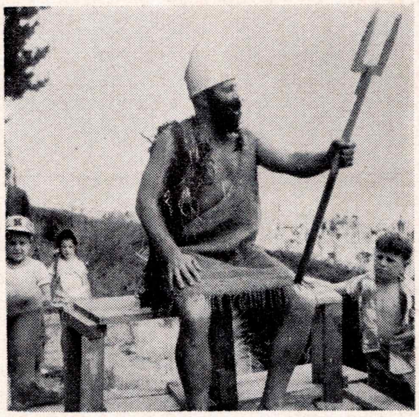
Ken thought he meant for him to blow it out with his mouth, so he put his mouth to the end of the hose and, just as he was going to blow, Hendy, not knowing what Ken was doing, turned the valve on and Ken received the full force of 120 lb. pressure down his throat.

His stomach shot out like a balloon, and he spent a fortnight in the hospital while they cleared the dust and dirt from his throat.

[10/6 goes to N. Nestor of 12 Pitt Street, Runanga. We publish this story as a warning to EXPERIENCED miners that, when a new chum is given instructions, make sure he understands them, and, even then, take all precautions. What is obvious to you might be entirely misunderstood by him.]

Just after World War II an American diesel engineer arrived in a small mining district in the South Island. He was placed in charge of a machine which was rather primitive by any standard. It was a struggle to get the thing started, and a similar struggle to stop it. On being asked his opinion of his first day's work, he replied with a typical American accent, "Ye Gods, I was so far back in the past today, I expected to see you miners coming out with stone axes."

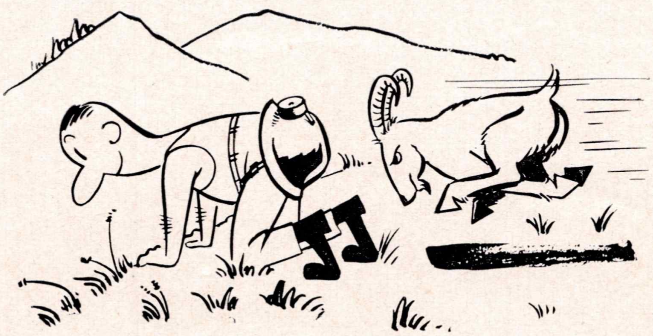
—Another 10/6 goes to "Budgie" of Blackball.



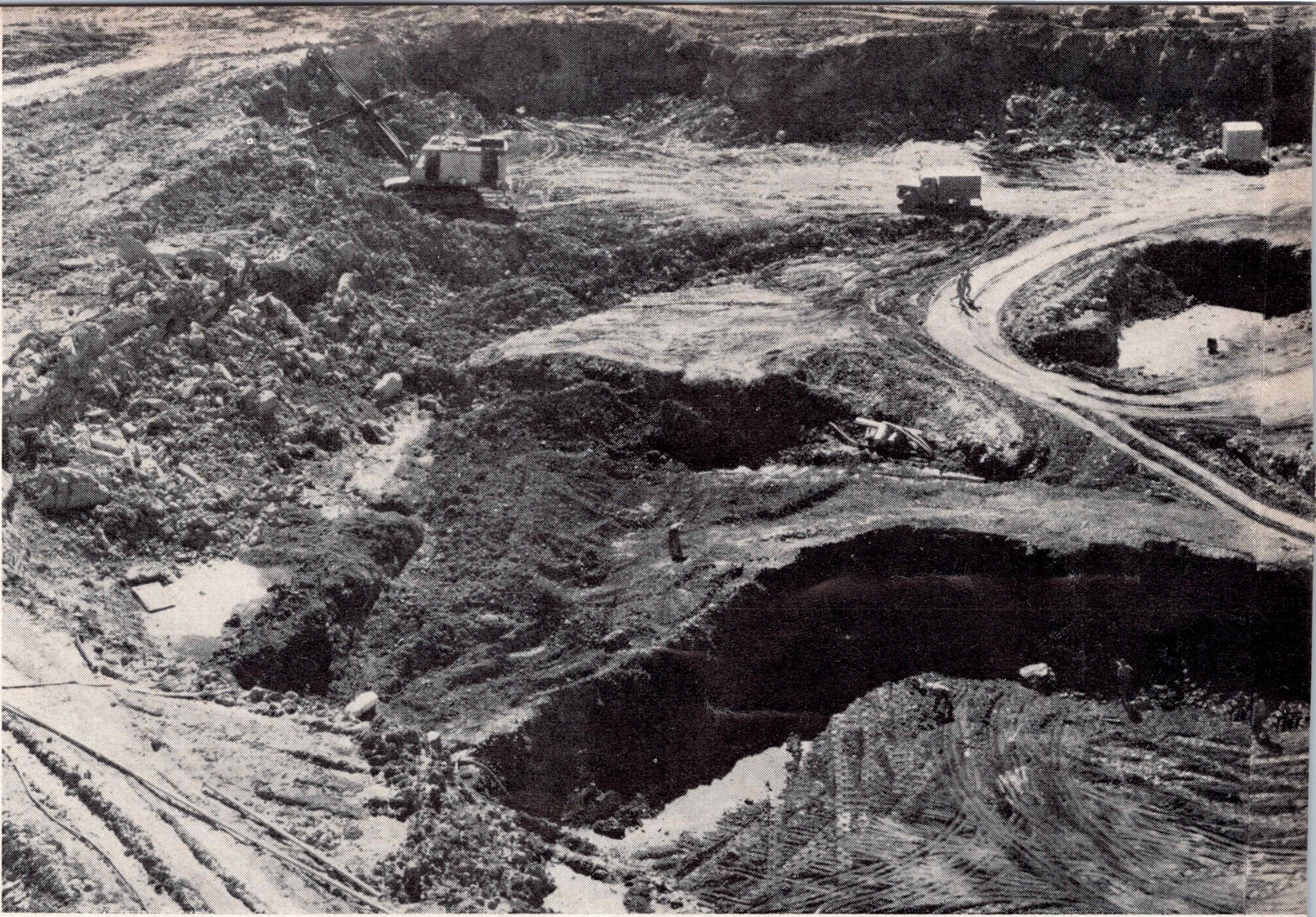
NEPTUNE

Look at this creature who came out of the sea!
He's enough to scare a little boy like me.
He sits on a throne with a sceptre in his hand,
A crown on his head and a beard so grand.
He's here for today, so Mummy tells,
To judge sandcastles and the bathing belles.
His name is Neptune, and he's king of the ocean.
How he lives there I haven't a notion!
When the carnival's over he'll go back to the sea.
Don't you think it's enough
To scare a little
boy
like
me?

This is just one example of what we want when we offer one guinea for photos with a story. The story can be humorous or serious. Mrs H. Pattinson, 7 Sutherland Street, Dunollie, Runanga, has chosen to send her story in verse, of King Neptune visiting the Surf Club Carnival at Tahuna Beach, Nelson, last year. Rumours that Shakespeare's statue at Stratford-on-Avon has turned green are quite unfounded.



HELMETS ARE PROVIDED FOR YOUR OWN SAFETY
. . . WEAR THEM AT ALL TIMES.



No. 3 opencast at Ohai showing the terracing by the

MECHANICAL MONSTERS

At the end of World War II, there was such a waiting list of road building and public works, it was quickly realised that only a large fleet of new and improved machines could possibly handle the work. Larger loads would have to be shifted at higher speeds.

Engineering experts came up with one answer—using twin engines to produce double power. The two engines were mounted side by side and each engine drove a separate axle. This gave greater power and greater capacity with less strain on moving parts. The Euclid model TS-24 at present stripping the overburden from the Ohai opencasts, is a fine example.

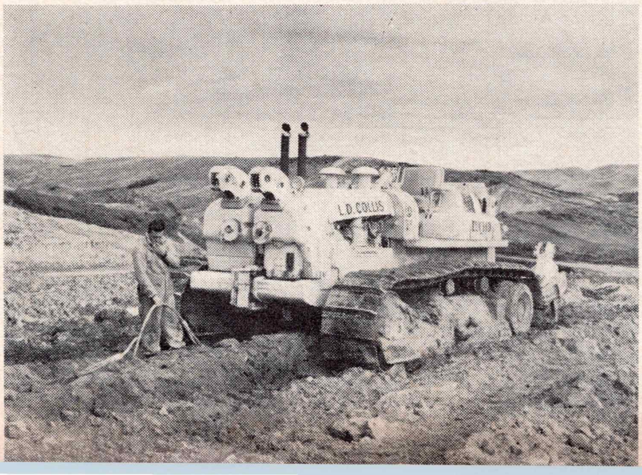
Dwarfing the operators who handle the great machines with such ease, these strippers are still highly manoeuvrable. They can make 180° non-stop turns in only 37 feet. The two engines, 336 h.p. in the tractor and 227 h.p. for the scraper axle, have separate torque converters and semi-automatic transmissions, thus giving all-wheel drive. Their low wide bowl has a heaped capacity of 32 yards and the bowl, apron and ejector are all hydraulically controlled.

One very important feature of the TS-24 is the NoSpin differential. In slipping conditions more torque is provided for the wheel having the best traction and this enables the machine to operate under almost impossible conditions.

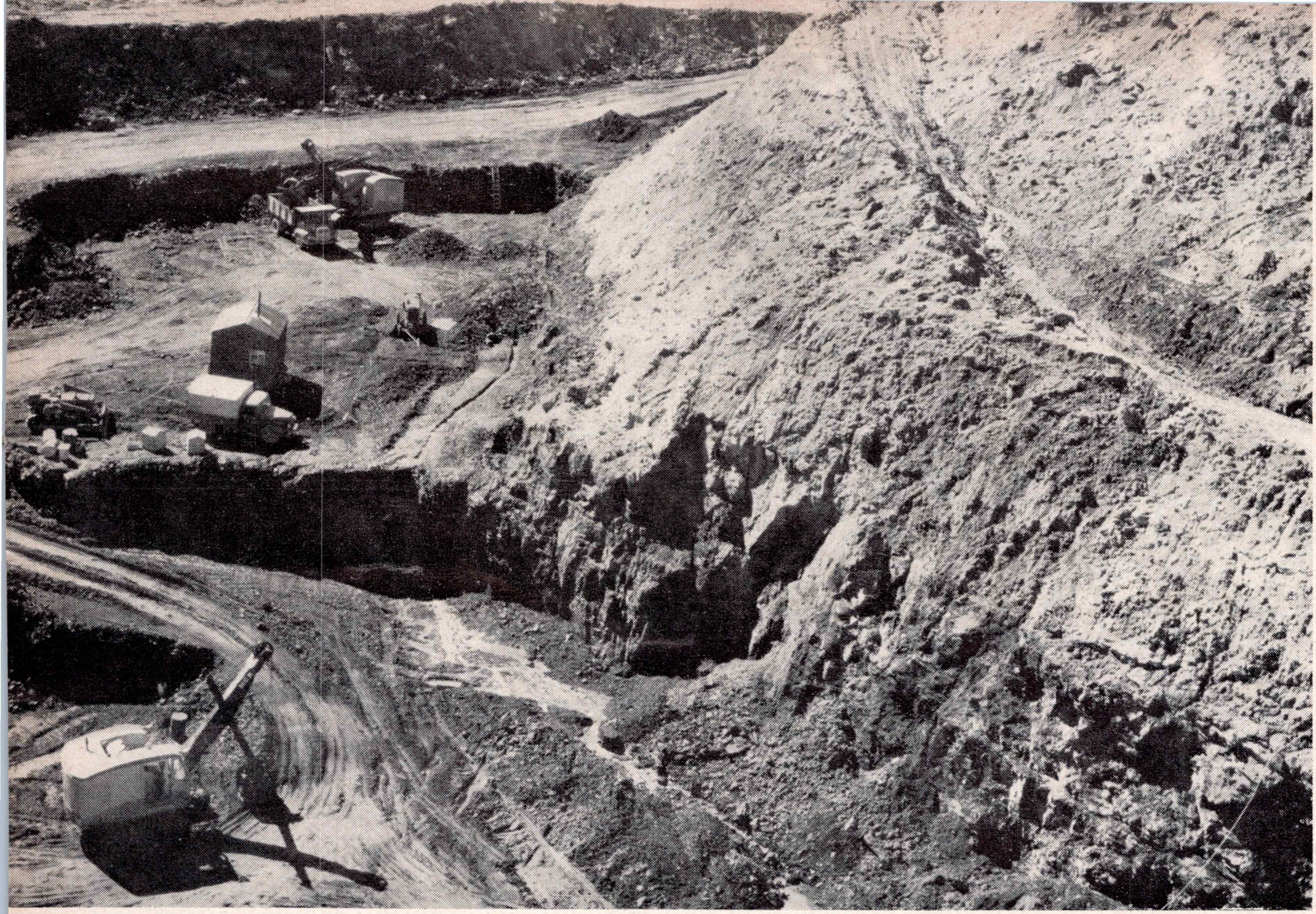
There is no clutch to this machine. The operator simply moves a selector lever to change from one speed range to another. The difference is taken up automatically by the Torqmatic drive.

Often allied to the TS-24 is another of the Euclid monsters—the TC-12 crawler tractor. This is another twin

A front view of the TC-12 showing the twin engines.



A trio of mechanical monsters at Ohai.



earth-moving machines to open up the coal seams beneath.

SHIFT THE EARTH . . .

engine machine with a great performance. The net horsepower of the two engines delivered to the power train is 425 h.p. This provides a reserve of power, reaching a drawbar pull of 146,000 lb. at a half-mile an hour, with adequate weight and traction. This machine also has no clutch, which allows for fast smooth changing of speed, fast reversing and counter rotation of tracks for a complete turn around in its own length.

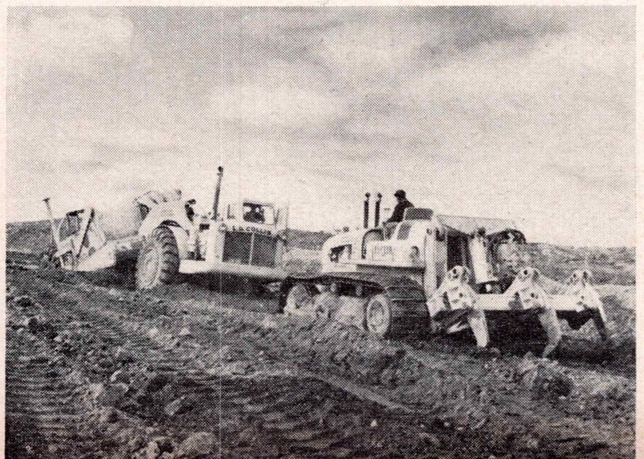
Low in height, yet having a clearance of 21 inches, the TC-12 has great stability. The tracks have 110 inch gauge, ride on a long 8-roller frame, with ground contact 131 inches. Weight is centred close to the ground and so provides a low centre of gravity.

Amongst the attachments for this powerful crawler, are strong tines for heavy ripping, while other accessories make the TC-12 a very versatile machine indeed.

These are just two of the great machines that have helped mechanise the winning of coal from the earth. Where formerly pick and shovel forced the miner underground, now the giant earth moving machines can strip the overburden with ease and lay the coal face open for far more efficient opencast operations.

When these pictures were taken these machines were doing a complete circuit from the dumping area in 4 minutes, shifting spoil at the rate of 64 yards every 4 minutes (16 yards a minute for the two machines). In fine weather the hours worked are 4 a.m. to 8 p.m. and in that time there is quite a lot of earth moved—probably something in the vicinity of 6000 yards.

Combined operations pull the TS-24 out of trouble.

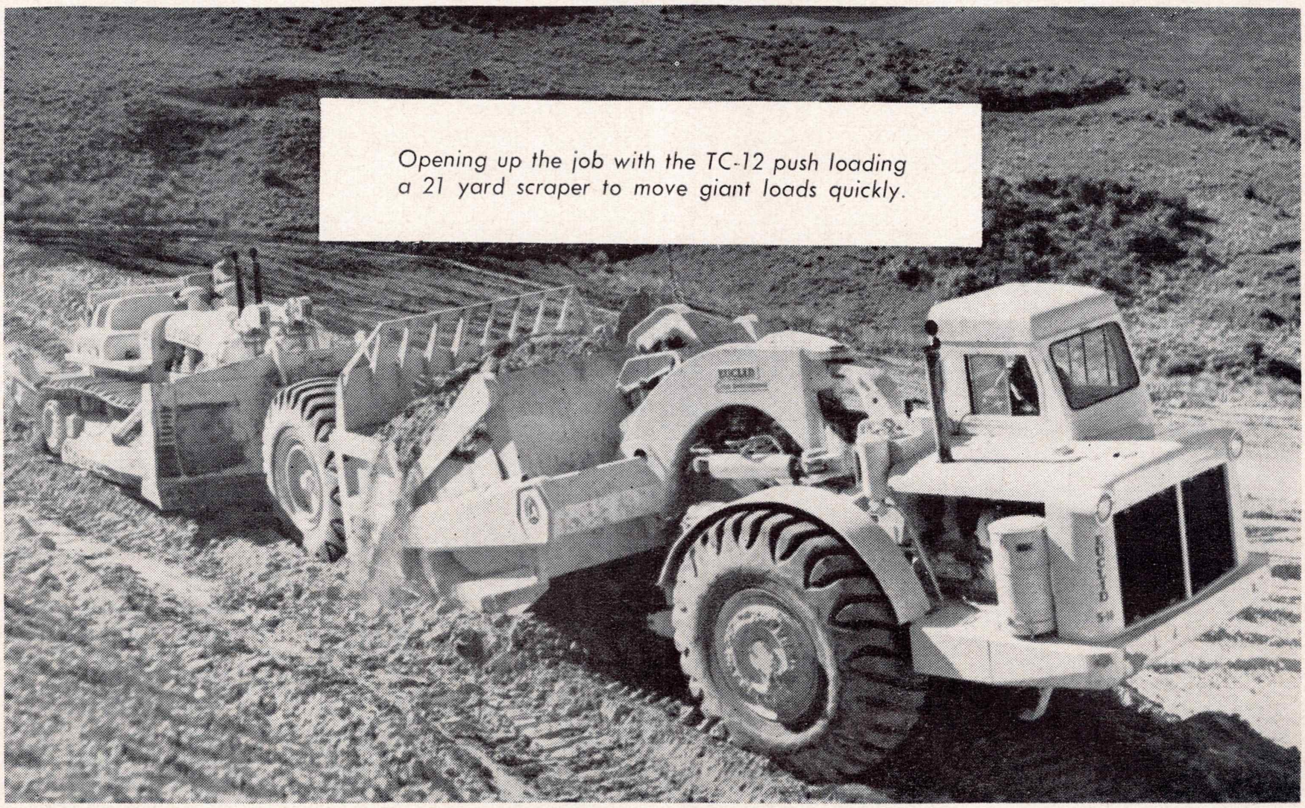


These great machines dwarf an average size man. Len Cook gives an idea of the size of the wheels of the earth scrapers at Ohai.

90,000 YDS. A MONTH WITH FOUR MEN AT OHAI !

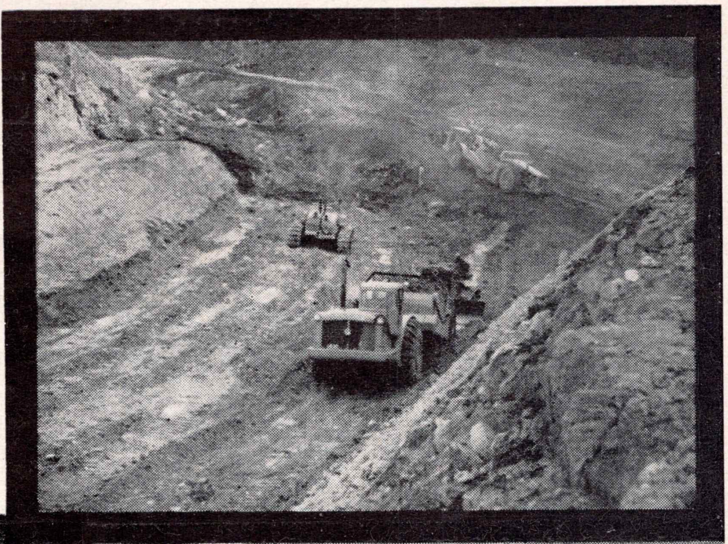
Another contractor uses Twin 'Eucs' for best return on investment

In an industry which is facing increasing competition, the lowering of production costs is vitally important. The application of EUCLIDS in stripping overburden at Ohai is helping the coal industry to keep faith with New Zealand. Euclids are in use all over the world on open cast coal sites, where large quantities of spoil have to be removed at the lowest possible cost. Nearly every type of EUCLID model has been used successfully in the Coal Industry. (Crawler Tractors, Scrapers, Rear Dumps, Bottom Dumps, and specially-designed Coal Haulers having capacities of more than 50 tons.)

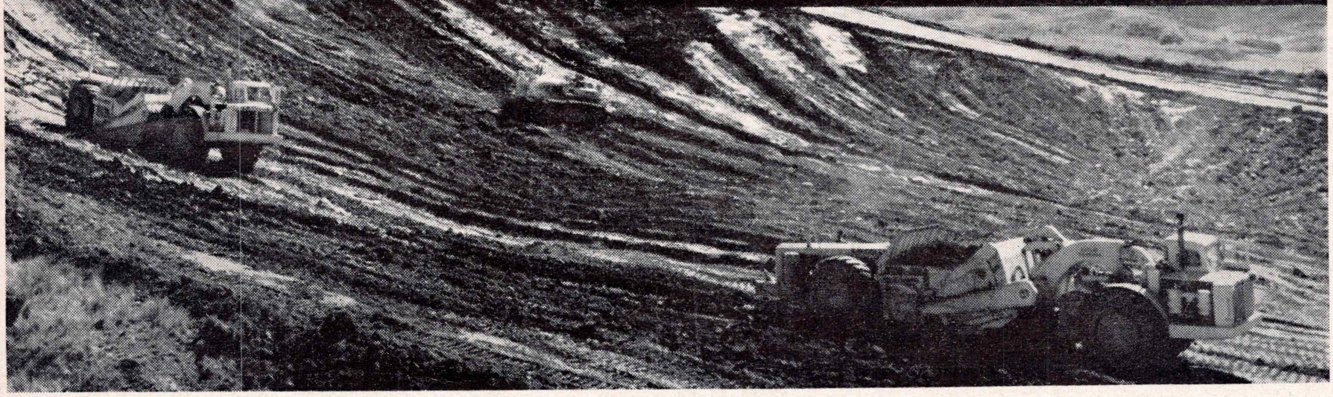


Opening up the job with the TC-12 push loading a 21 yard scraper to move giant loads quickly.

The TC-12 rips tough sandstone in this deep cut which is then removed by the TS-24's in 30 yard bites.



TS-24's self loading in the early stages of stripping the overburden off another section in the Ohai contract.



When L. D. Collis gained a contract at Ohai to shift a million yards of overburden, he chose a team of two Euclid TS-24 scapers and a Euclid TC-12 crawler tractor for peak production. The Euclid TS-24 is an all-wheel drive 24 yard scraper having two engines, one driving each axle through a torque converter and automatic power shift transmissions. The total of 563 h.p. moves 40 tons in one bite. The twin engined TC-12 is the world's most powerful crawler tractor and automatic transmissions with fully independent track drive provide manoeuvrability in the extreme. Very wet conditions in the cut, and steep grades out of the cut, make this job at Ohai suitable only for all wheel drive machines.

The ability to self load satisfactorily on most of this contract (push loading being used on the ripped sandstone only) has assisted Mr. Collis to get outputs of 90,000 yards a month with his team of "EUCS" and only four men.

Get details of the Euclid team for **your** job from . . .

CLYDE ENGINEERING
LIMITED

P.O. Box 480, Lower Hutt, and at
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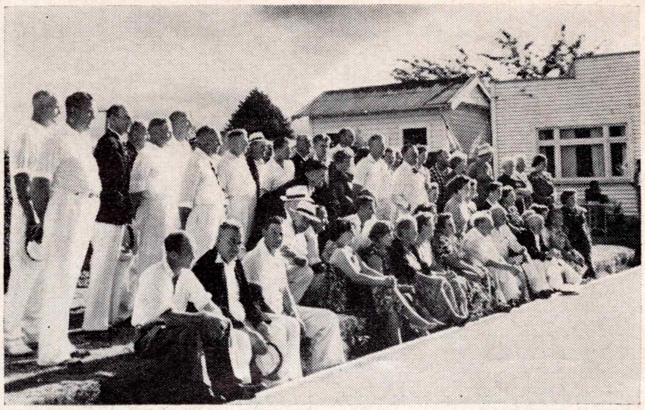
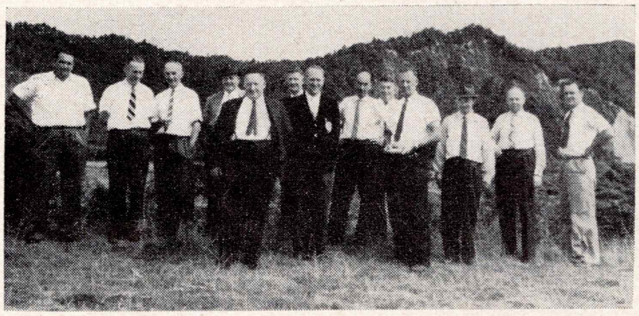
CE.28

PICS *and* PERSONALITIES *from* DENNISTON *and* REEFTON

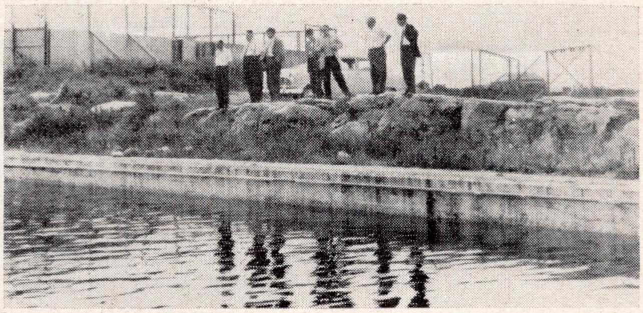
Tony Prendiville plays badminton at Denniston. According to rumour he even beat Sid Kennedy.



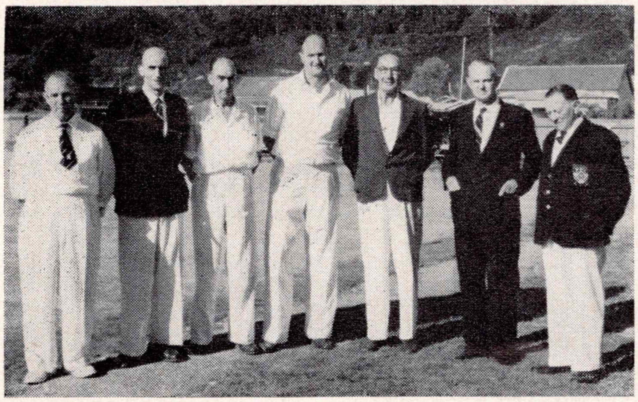
This picture shows the crowd at the Reefton Bowling Club Jubilee.



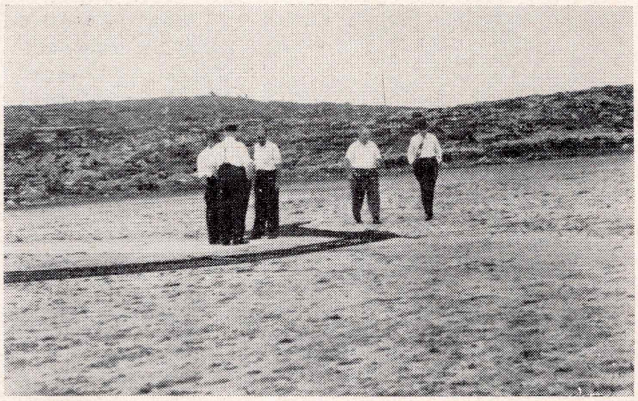
At Reefton Golf Club. C. Rainbird, J. Lee, J. Blackmore, E. C. Higgins, W. Schroeder, V. Newcombe, F. Archer, J. Weir, S. Kennedy, R. R. Carroll, G. Whitlock and D. McVicar. "Out on his own" is A. V. Prendiville.



Viewing the Denniston baths are Messrs F. F. Archer, A. V. Prendiville, G. Whitlock, J. Cotter, W. L. Kerse and R. R. Carroll.



Notables at the Reefton Bowling Club Jubilee. H. Foreman (secretary), A. Archer (president), F. Archer (past president), B. Alty (vice-president), L. Russell (past president), C. D. Doyle (past president), T. L. Floyd (past president).

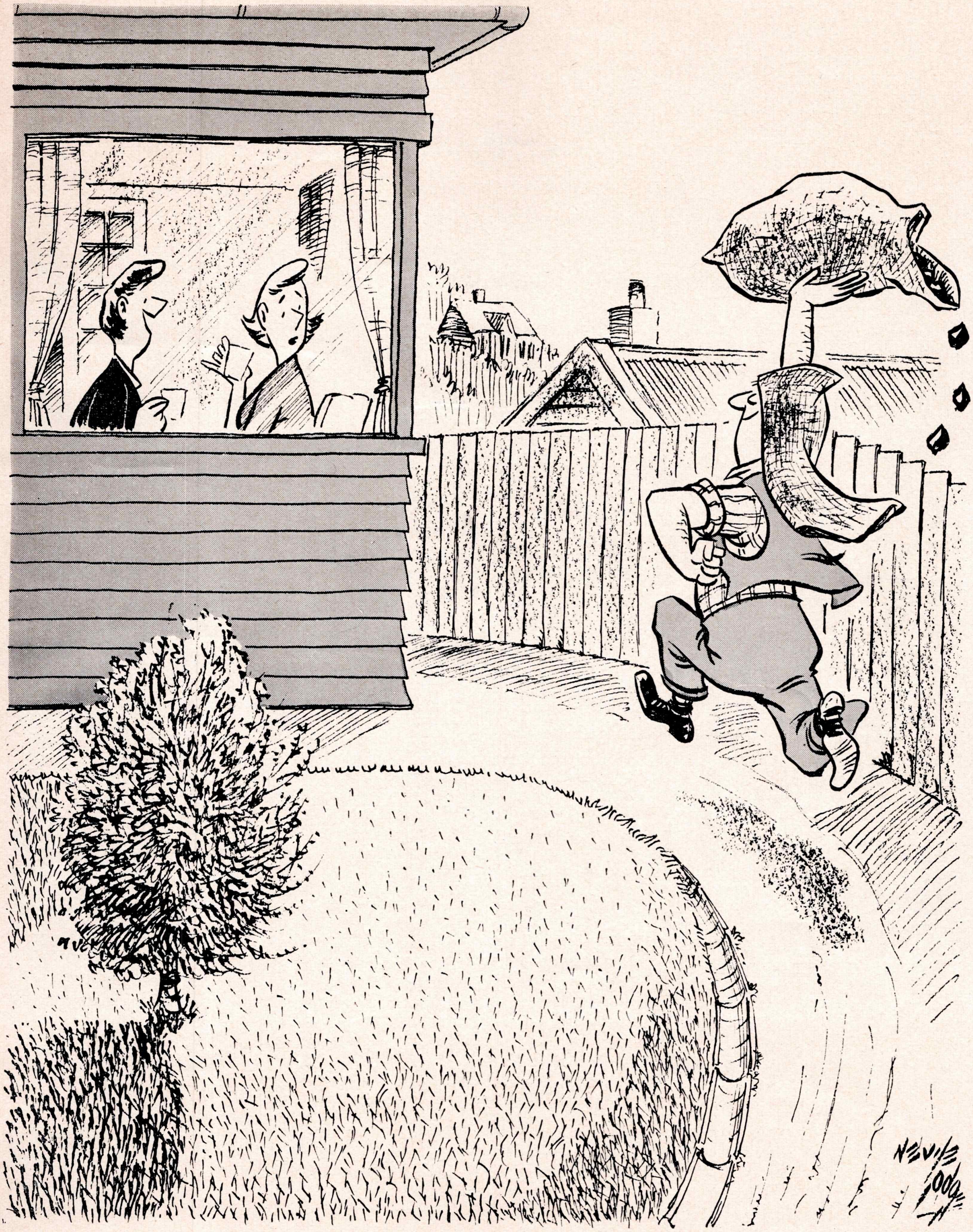


At the Denniston Domain. R. R. Carroll, A. V. Prendiville, F. F. Archer, W. L. Kerse and G. W. Whitlock.

Helping others to help themselves . . .

There is no human activity as worthwhile as the encouragement of others—taking time off from one's own affairs to help a fellow creature deal with life. It's much better than actually doing things for him because it gives him the eventual pride of having had the strength and courage to overcome a difficulty himself.

—Mrs F. Bloom, Chairman of Britain's National Deaf Children's Society, on a BBC programme.



"Ah, that'll be the Strongman coal I ordered."

The Feminine Viewpoint

by Joanna Wells

RECIPES and HINTS

Sweetbreads in White Sauce

Soak the sweetbreads in luke warm water, slightly acidulated with vinegar or lemon juice, changing it twice in 1½ hours, then put the sweetbreads in cold salted water; bring them quickly to the boil and cook them for 10 minutes or longer; if they are large, until firm and plump. Press them between two plates with a weight on top until cold; trim them neatly; make some white sauce, flavouring it with a little cayenne, salt, mace, celery, lemon juice, shallot. Let the sweetbreads cook slowly in it, so that they may be well flavoured and very tender; serve them in slices with mashed potato and strain the thick sauce over them. Garnish with lemon slices and fried sippets.

★ ★ ★

English Plum Cake

1½ lb flour, ½ lb cornflour, 1 lb raisins, ½ lb currants, ½ lb sultanas, ¼ lb mixed peel, ½ lb good dripping, ½ lb brown sugar, 2 eggs, 1 teaspoon soda, 1 teaspoon cream of tartar, 1 pint sour milk. Sift flour, rub in dripping, add fruit and sugar; make hole in centre and mix in cream of tartar, baking soda and milk, which will boil over. Then stir in, adding more milk if required to make fairly moist. Bake 3 hours in moderate oven.

★ ★ ★

Marble Cake

Light part: ½ lb butter, 2 small cups sugar, 1 cup milk, 4 eggs, 3 teaspoons baking powder, 3½ cups flour, ½ teaspoon vanilla, ¼ lb cherries, ¼ lb blanched almonds.

Dark part: 2 tablespoons treacle, 1 tablespoon cocoa, ½ teaspoon spice, ½ teaspoon cinnamon, little nutmeg, ½ cup chopped raisins.

Beat butter and sugar to a cream, beat in eggs, one at a time, add alternately with flour and baking powder. Divide mixture in half, add dark part ingredients to one half, then vanilla, cherries, almonds to light part. Put dark mixture in greased cake tin first, the light mixture on top. Bake in moderate oven.

★ ★ ★

Economical Cake

1½ lb flour, ¾ lb butter, ¾ lb sugar, 4 eggs, 2 lb mixed fruit, ½ cup golden syrup, ½ lb lemon peel, ½ pint milk, 1 teaspoon cream of tartar, ½ teaspoon baking soda. Mix as usual and bake 3 to 4 hours.

★ ★ ★

Christmas Cake

(keeps for months)

½ lb flour, ½ lb butter, ½ lb sugar, 6 eggs, 1 lb raisins, 1 lb currants, ¼ lb mixed peel, ½ lb sultanas, 1 dessertspoon mace, 1 dessertspoon cinnamon, 1 teaspoon nutmeg, ¼ lb almonds, ½ wineglass sherry, ½ wineglass brandy, 1 teaspoon orange flower water, 1 teaspoon baking powder. Mix sherry and brandy together and add spices and leave overnight. Clean all fruit, dredge flour in lightly, beat butter and sugar together, separate yolks from eggs, beat yolks lightly, add to butter alternately with the flour, then beat whites to stiff froth and stir in lightly. Now add 1 large cup of plum jam. Bake 4 hours, slowly.

★ ★ ★

Ginger Shortbread

Cream ½ cup of butter and ¼ cup sugar; mix in thoroughly 1 cup golden syrup and then sieve in 2 cups flour, 1 cup fine oatmeal, 1 tablespoon ginger, 1 teaspoon mixed spice. Stir well and add ¼ cup chopped peel and mix all with thin cream. Pour in greased tins and bake 40 minutes in plain icing.

When cooking acid fruits put a small pinch of carbonate of soda in; less sugar will be needed and you will get a greatly improved flavour.

When cooking fish, sprinkle lemon or vinegar over it and let it stand for 10 minutes. This will improve both the appearance and flavour.

When cooking fruit, add a little salt; you will be surprised at the improved flavour. A pinch of salt is sufficient for a fruit tart; a little extra for pie.

As a substitute for butter, beat your beef or mutton dripping to a cream with a little baking powder and a squeeze of lemon juice. It will lose all taste of dripping and is very light for pastry and cakes and more economical than butter or lard.

To preserve lemons, rub thoroughly with dry cloth until skins are clean, roll them in beaten white of egg and let dry. They will keep for months. When requiring to use, rub coating off with hands and they are as good as fresh lemons.

As a substitute for eggs, when they are scarce, a tablespoon of golden syrup in a cup of warm milk equals three eggs in making puddings. Golden syrup will serve the purpose of sugar, eggs, milk when used in making a pudding and will keep it moist.

If you are without a cooler or refrigerator, try this method of keeping your butter cool. Wrap butter in greaseproof paper, then roll tightly in wet newspaper and place in coolest part of your cupboard. Keep the newspaper wet and your butter will keep firm.

To clean cork table mats

Put into a bowl of clean cold water and rub with a piece of smooth pumice stone. Rinse under a running tap and put into a cool place to dry. Do not use soap or warm water.

Prolong the life of silk stockings

When new, put stockings into lukewarm water to which has been added 1 or 2 tablespoons of salt. Squeeze them out and then dip into warm soapy water and then hang out to dry.

Non-slip floor polish

Place a small lump of floor polish in a bucket, pour sufficient boiling water over to dissolve, then add soapy water and wash your floors as usual. This is a particularly safe way of polishing your floors where there are children.

The Bunny-Jump Game

It was a wet day outside. John and Joan had nothing to do, and **anybody** who has nothing to do gets bored. They sat by the fire and thought of all the nasty things they could say to each other.

Mother was busy in the kitchen but she could hear the two children quarrelling and it worried her.

Then suddenly she had an idea — a game with cards that she hadn't played since she was a little girl. So she said "Would you like to play the Bunny Jump game?"

"No!" said John.

"No!" said Joan.

But mother said nothing. She just took out a pack of cards, shuffled them and then made two twisty paths of cards across the floor. The children had not seen this game before, and they watched with **involuntary** interest. Mother took two bottle tops and placed them on the first cards in the paths. "Now, John, you turn over your card," she said, and John, wondering what it was all about, did as he was told. Then Joan had her turn and in no time the children were interested in the game, while mother, with a relieved smile and a thankful heart, returned to the kitchen.

Now, the Bunny Jump game is easy to play and children of all ages can play it. If you'd like to try, this is what you do:

For two players, take a pack of cards and make two twisty paths of cards across the room, face downwards, with an equal number of cards in each path. Place your counters (bottle tops will do) on the two end cards. Taking turns, you turn over the card your counter is on and then:

(1) If the card is red, your counter goes one jump to the next card.

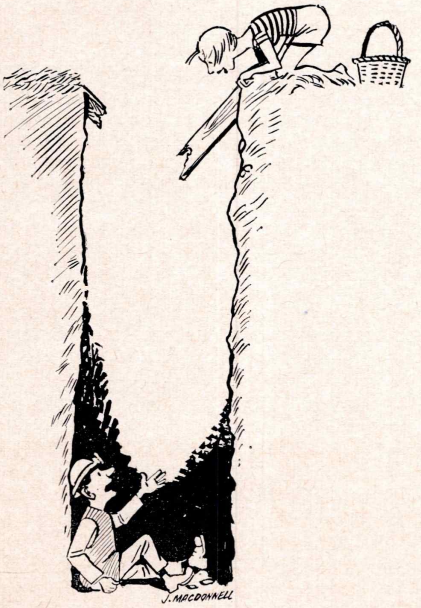
(2) If the card is black, your counter goes two jumps.

(3) If the card is a picture card (Jack, Queen or King), you go three jumps.

(4) If the card is the ace of spades, you go five jumps.

First to the end of the trail wins. Shuffle the cards and lay two more trails. If there are more than two players, use two packs of cards and make more trails.

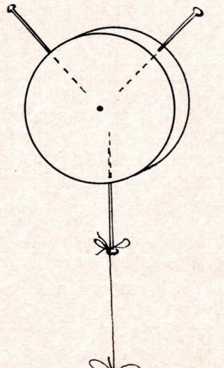
* *

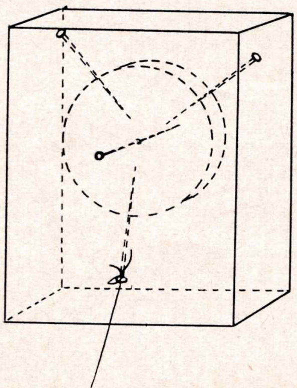


"Would you drop me a line?"
"Of course. What's your address?"

* *

SOMETHING TO MAKE



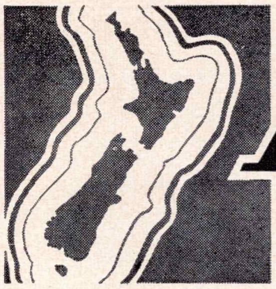


Would you like to make a clock? It's quite easy really, and gives the little ones lots of fun. Here's how you do it.

First you need the outside of a match box. Then cut the end off a bottle cork (cut off about $\frac{1}{2}$ inch thick) and stick three pins into the edge of the cork as illustrated (Looks like a **Sputnik,** doesn't it?).

To the bottom pin, attach a piece of cotton about 2$\frac{1}{2}$ inches long, with a weight on it. Place the cork inside the matchbox and push a long pin right through the middle of the matchbox, cork and everything.

Now as you swing the matchbox backwards and forwards, the pins will hit the side and it will tick like a clock. You can draw a clock face and paste it on the front if you like.



District News

— OHAI —

Transfer: Prior to her departure on transfer to Head Office, Wellington, Miss Veronica Guttery received a presentation from the staff at the Mine Office on Monday, February 20. The district manager, Mr L. C. Cook, made the presentation and wished Miss Guttery every success and happiness in the capital city. Other members of the staff took the opportunity to bid farewell to this popular member of the Ohai office staff.

Sport: Winter sport is now in full swing with rugby and basketball. A table tennis club has been formed in the district, and the opening night attracted a large attendance.

The fishing season was not as successful as the previous one because of bad weather over the holiday period. The Ohai Fire Brigade went fishing recently when they were called upon to drain a pond at Ohai where salmon, imported from Scotland last February, were examined for condition. The Southland Acclimatisation Society intend crossing Baltic salmon from Sweden with the Helmsdale salmon from Scotland in an effort to breed a type of salmon that would return up New Zealand rivers and estuaries. They **could** try crossing them with homing pigeons.

The shooting season opened on May 6 and much work has been put into preparing the maimais and overhauling the equipment.

– WEST COAST –

The Coal Amenities Council visited the Buller mining areas last February. While in the district they visited all the mining townships and met deputations from various organisations.

Hon. T. P. Shand, Minister of Mines, accompanied by the Undersecretary, Mr P. M. Outhwaite, visited the Coast in March and met some of the worst weather that area can provide.

The general change over of managers is now complete. Mr Glendenning to Greymouth; Mr Lockington to Ngakawau; Mr Adamson to Greymouth; Mr Connew to Denniston.

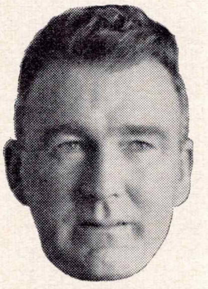
Golden Wedding

Congratulations to Harry and Caroline Dowse of Waimangaroa, who, on February 8 celebrated their Golden Wedding at the home of their daughter and son-in-law, Mr and Mrs Milligan, Cobden. Harry had a day out of hospital to celebrate the occasion.

OBITUARY

It is with regret that Coal reports the passing of Mr Jack Chippendale, Mr Jock Mungal and Mr F. "Racker" Burns, three of the oldest and most respected citizens of the West Coast.

★ ★ ★



Ron Humphries

It was a pity that the weather stopped any thought of the cricket match between the M.C.C. and the Combined West Coast - Buller team on March 4. Of the combined team, two members of interest to Coal are W. Baird, the home captain, a clerk in the State Coal Mines in Denniston, and the veteran Ron Humphries who has played more representative games than he can remember. Ron is the Flume Superintendent at Fly Creek Hydro Mine at Stockton.

"Nothing ever happens in the Waikato"

From time to time Coal has complaints from various areas that they have not had a mention in Coal Magazine.: We are not only prepared to accept items from the smaller areas, we positively WELCOME them.

We even appointed special correspondents to cover the larger fields, and readers should note, and take to heart, a report from our representative in the Waikato area, published below.

We refuse to believe our correspondent's assertion that NOTHING ever happens in this locality, but we back her to the hilt in asking the Waikato residents, both miners and managers (or their wives) to get behind this magazine, heed the heart-rending plea of our correspondent and phone her the news.

Please do not be nervous about it. We guarantee she does not bite.

– WAIKATO –

Mr C. E. K. Alecock, M.I.C.E., A.M.N.Z.I.E., Assistant Commissioner of Works, Ministry of Works, and a director of the Maramarua Coal Company, retired from the Public Service on April 12 after forty-two years' service.

★ ★ ★

"PERSONALS? From Huntly? But NOTHING ever happens here."

That was the reply from eight different people connected with the coal industry in the Waikato when a representative of Coal asked "What goes on in the mining districts?"

A prospective "tip" man, who is always on holiday or off with the 'flu just prior to each issue of Coal said from Rotowaro that "Nothing EVER happens here."

"What — no births, deaths, marriages, engagements, twins born, big fish caught or bowling tournaments won?" asked Coal.

"Nope—nothing ever happens here."

Coal asked Mr T. McGhie—formerly of Buller and now District Manager at Huntly. No, nothing happened there, he said.

Everything just went along as usual. No, there were no changes in staff. No, no one went deep sea fishing. No, they hadn't been on any exciting holidays overseas. Or even in New Zealand, for that matter. The Minister of Mines had been round the coalfields, of course. But we knew about that. We went with him.

Then there was Mr Littlejohn — of Kimihia and Weaver's Crossing. No. nothing had happened recently, but he would keep his ears open.

There were the Jones' at Rotowaro. Allan manages the Carbonisation works. I phoned three nights in a row at the weekend and got no answer so SOMETHING must be happening there. Yes, I know—they went to their delightful seaside home at Whitianga, spent the weekend fishing and water skiing. And Joy, who is Mrs Jones and very good at it, probably picked up a few more pieces of driftwood which her husband will very capably and beautifully turn into ornaments.

I phoned Miss Hodgson, a stalwart newsgatherer known to everyone in Huntly. She had never HEARD of anything happening in Huntly. "We're just ordinary people here," she pointed out, "nothing ever happens to us."

I phoned the Meremere Steam Power Station, because I know there has been a change of management there. There was no answer.

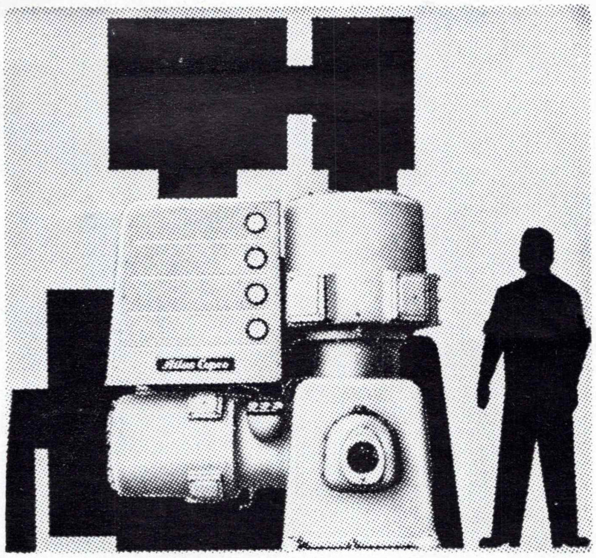
Huntly — please — if ever anything DOES happen, will you let me know?

Barbara Baigent,
Phone 65-459,
Hamilton.

New Compressor Design

Saves space - reduces running costs

The Atlas Copco ER6 is a new stationary compressor which uses fundamental improvements in design to achieve remarkable results in performance and efficiency. The illustration shows the size of the ER6 compared with a conventional compressor of similar output; yet this extraordinary saving in space achieved with added efficiency and economy.



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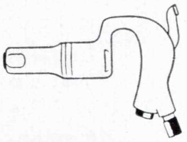
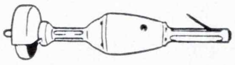

CHIPPING HAMMERS

RAMMERS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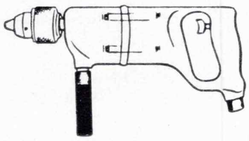
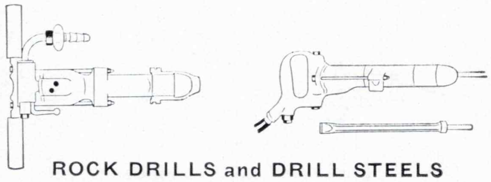
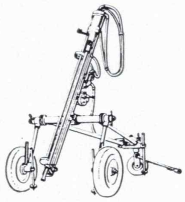

DRILLS

SCREW DRIVERS
and TAPPERS

. . . in mines and quarries


ROCK DRILLS and DRILL STEELS


WAGON DRILLS

BENCHERS

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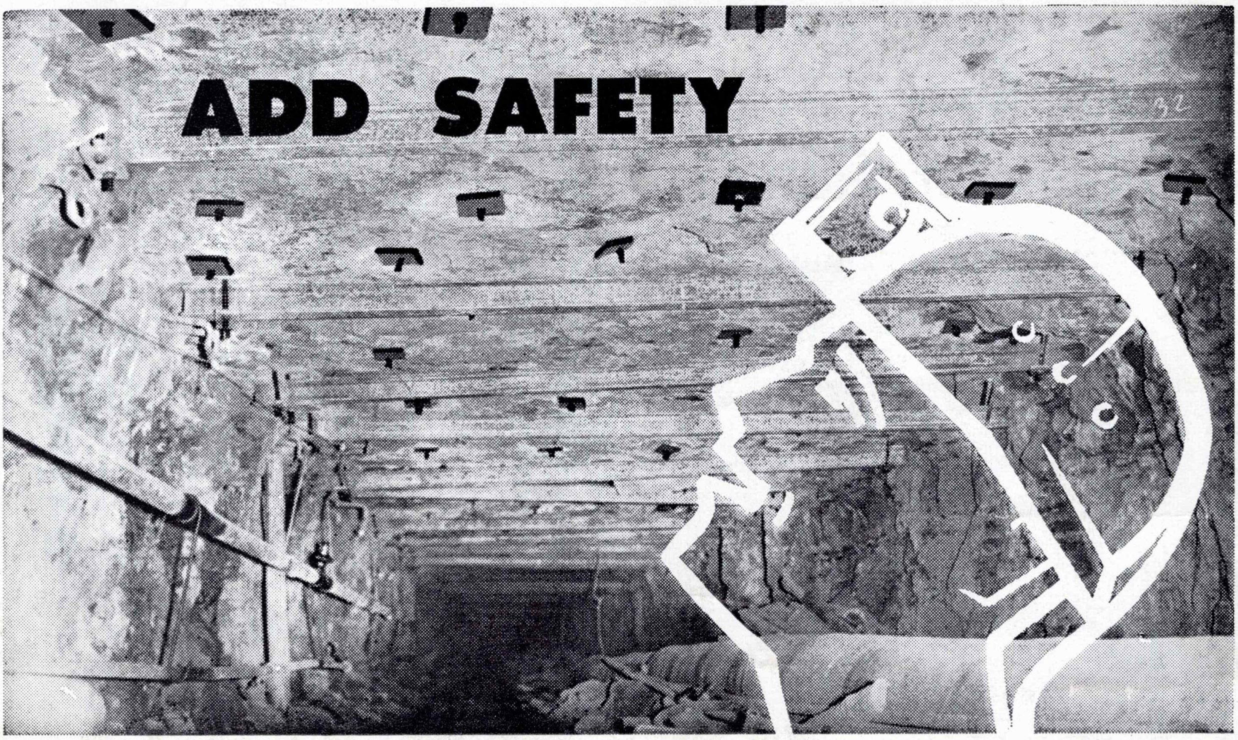

VIEW OF THE KEMIRA TUNNEL

save space at less cost with

TITAN ROCK BOLTS

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The SLOT and WEDGE type bolt is made from specially selected steel. It is invariably supplied as a set with bolt, wedge and plate washer. A special washer is available for use with TITAN CHANNEL SETS.

EXPANSION-TYPE rock bolts are made from specially selected high tensile steel suitable for installation in either auger-drilled or stoper-driven holes. The hole length need not be exact.

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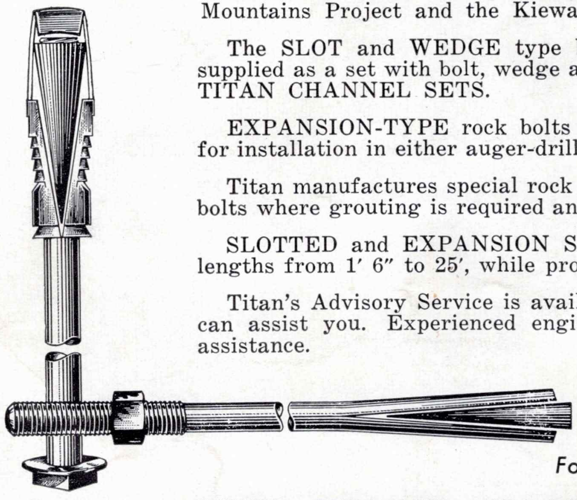

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